

KV-27TS29 / 27TS32 / 27TS36

RM-Y116

RM-Y117

RM-Y118

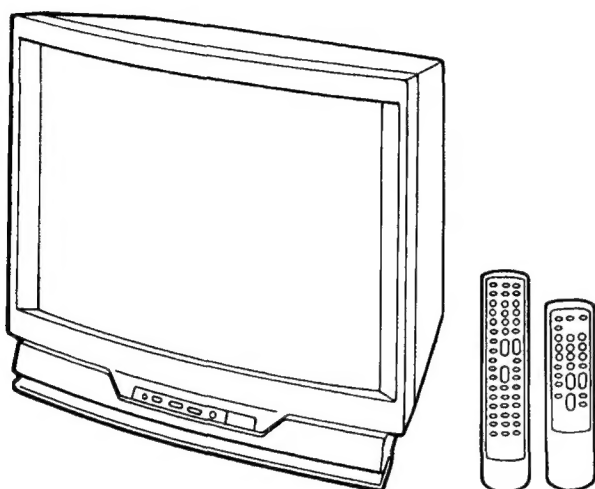
KV-32TS36 / 32TS46

RM-Y118

RM-Y118

SA-W200

SERVICE MANUAL



US Model

KV-27TS29 Chassis No. SCC-F84C-A

KV-27TS32 Chassis No. SCC-F84E-A

KV-27TS36 Chassis No. SCC-F84D-A

KV-32TS36 Chassis No. SCC-F84A-A

KV-32TS46 Chassis No. SCC-F84B-A

Canadian Model

KV-27TS29 Chassis No. SCC-F85C-A

KV-27TS36 Chassis No. SCC-F85D-A

KV-32TS36 Chassis No. SCC-F85A-A

KV-32TS46 Chassis No. SCC-F85B-A

AA-1 CHASSIS

MODELS OF THE SAME SERIES

KV-27TS29/27TS32/27TS36

KV-32TS36/32TS46

KV-2970RS/2970M/2975M

SPECIFICATIONS

Television system American TV standards

Channel coverage VHF 2-13
UHF 14-69
Cable TV 1-125

Picture tube Hi-Black™ Trinitron® tube
27-inch picture measured diagonally
29-inch picture tube measured diagonally (KV-27TS29/27TS32/27TS36)
*32-inch picture measured diagonally
34-inch picture tube measured diagonally (KV-32TS36/32TS46)

Antenna 75-ohm external antenna terminal for VHF/UHF

Input

VIDEO and S VIDEO

S VIDEO IN (S terminal)

Y 1 Vp-p, 75-ohms unbalanced, sync negative

C 0.286 Vp-p (Burst signal), 75-ohms

Video (phono jacks) 1 Vp-p, 75-ohms unbalanced, sync negative

Audio (phono jacks) 500 mVrms (100% modulation)
Impedance: 47 kilohms

— Continued on next page —



TRINITRON® COLOR TV

SONY®

KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46RM-Y118 RM-Y118
SA-W200**Output**

AUDIO OUT (phono jacks)
More than 408 mVrms at the
maximum volume setting (variable)
More than 408 mVrms (fix)
Impedances: 5 kilohms

Speaker output

5 W × 2

Audio frequency response

: FRONT 80Hz - 20kHz

Power requirements 120 V AC, 60 Hz**Power consumption**

KV-27TS29	165 W
KV-27TS32	165 W
KV-27TS36	170 W
KV-32TS36	195 W
KV-32TS46	205 W

standby mode 5 W

Dimensions/Weight

	Dimensions (w/h/d)	Weight
KV-27TS29	661 × 603 × 522 mm (26 ¹ / ₈ × 23 ³ / ₄ × 20 ⁵ / ₈ in)	45 kg (99 lbs 4 oz)
KV-27TS32	661 × 603 × 522 mm (26 ¹ / ₈ × 23 ³ / ₄ × 20 ⁵ / ₈ in)	45 kg (99 lbs 4 oz)
KV-27TS36	661 × 603 × 522 mm (26 ¹ / ₈ × 23 ³ / ₄ × 20 ⁵ / ₈ in)	45 kg (99 lbs 4 oz)
KV-32TS36	781 × 712 × 612 mm (30 ³ / ₄ × 28 ¹ / ₈ × 24 ¹ / ₈ in)	71 kg (156 lbs 9 oz)
KV-32TS46	781 × 712 × 612 mm (30 ³ / ₄ × 28 ¹ / ₈ × 24 ¹ / ₈ in)	71 kg (156 lbs 9 oz)

Supplied accessories

(KV-27TS29)
Remote Commander RM-Y116(1) with 2
size AA (R6) EVEREADY batteries
(KV-27TS32)
Remote Commander RM-Y117(1) with 1
size AA (R6) EVEREADY battery
(KV-27TS36/32TS36/32TS46)
Remote Commander RM-Y118(1) with 1
size AA (R6) EVEREADY battery
(KV-32TS46)
Active Super Woofer

Recommended accessories

U/V mixer EAC-66
Connecting cable
VMC-810S/820S, VMC-720M,
YC-15V/30V, RK-74A

Design and specifications are subject to change without
notice.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY
SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF
LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO
THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE
SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS
LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE
COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS
APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS
PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE
CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS
MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITI-
CAL COMPONENTS ARE REPLACED OR IMPROPER OPERA-
TION IS SUSPECTED.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT
D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR
D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ
À L'ALIMENTATION SECTEUR.

**ATTENTION AUX COMPOSANTS RELATIFS À LA
SÉCURITÉ!!**

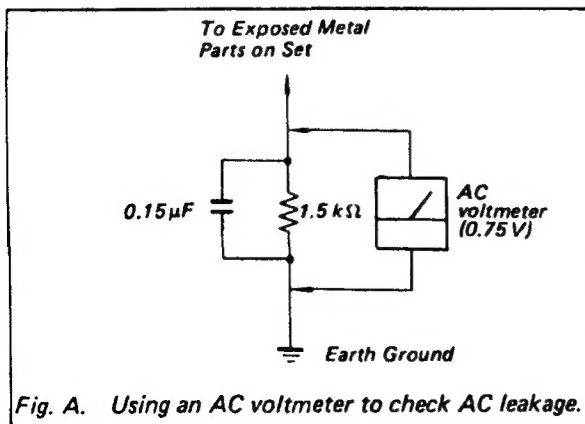
LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE
MAPQUE Δ SUR LES SCHÉMAS DE PRINCIPE, LES VUES
EXPLOSÉES ET LES LISTES DE PIÈCES CONT D'UNE
IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU
FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES
COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ
DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS
PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT
L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU
FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT
MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE
REMPACEMENT DE COMPOSANTS CRITIQUES, OU
LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).
 Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.



LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60–100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

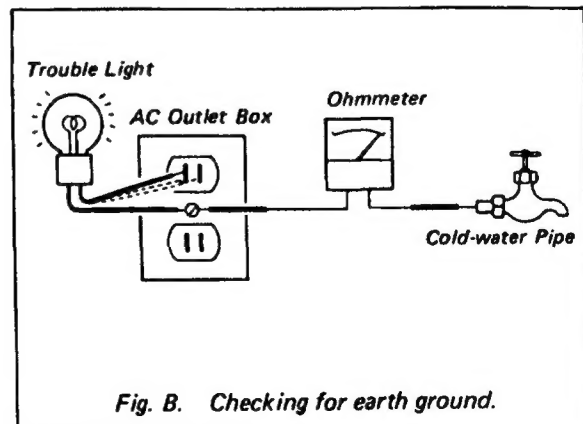


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SECTION 1

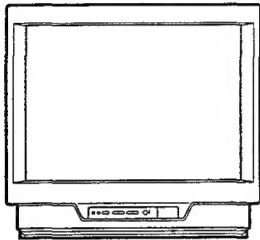
GENERAL

This section is extracted from instruction manual.

1-1. INTRODUCING THE SONY TRINITRON® COLOR TV

Design

KV-27TS29 KV-32TS36
KV-27TS32 KV-32TS46
KV-27TS36

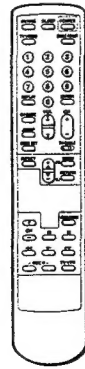


Supplied Remote Commander

RM-Y118



RM-Y117



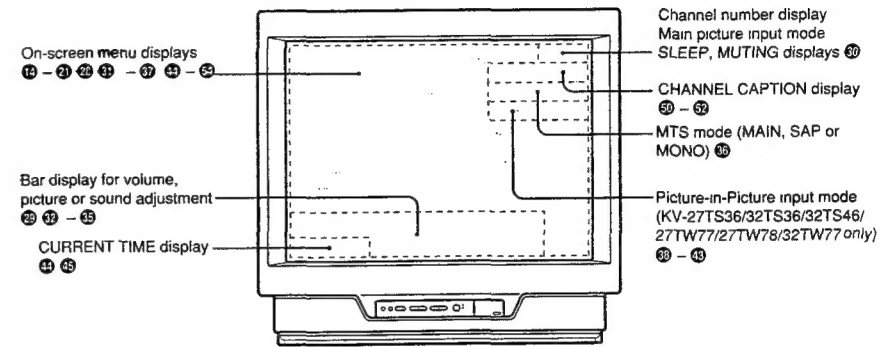
RM-Y116



1-2. LOCATING THE CONTROLS

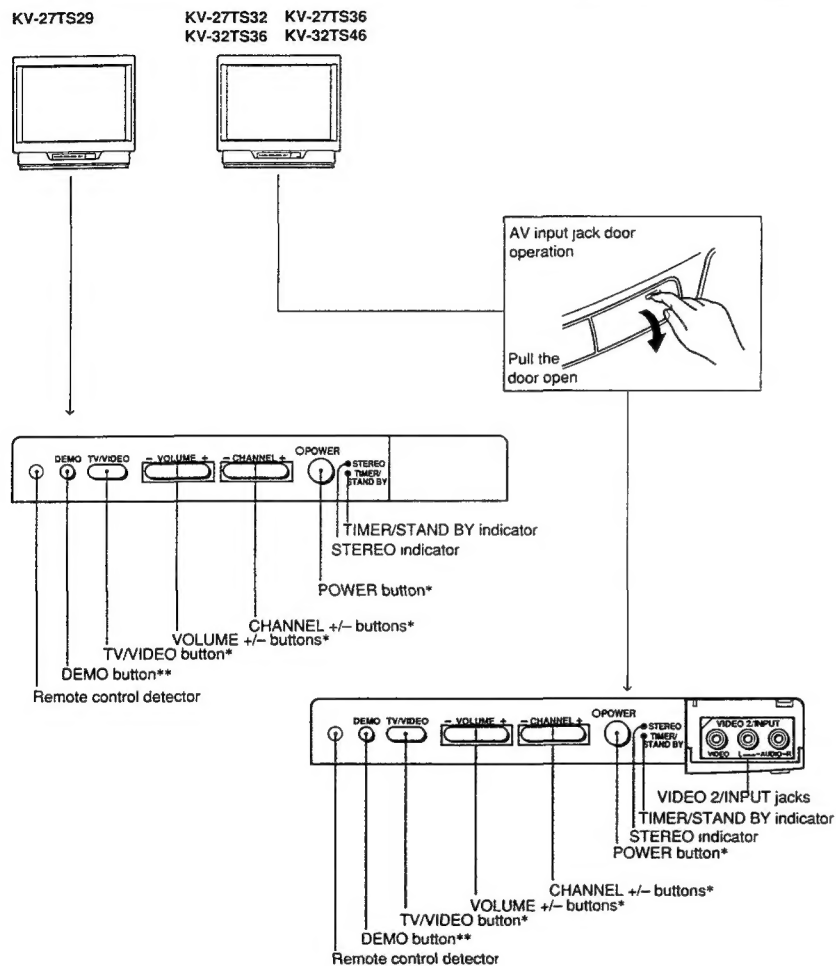
Screen Displays

For details, see the pages indicated by the numbered black circles ●.



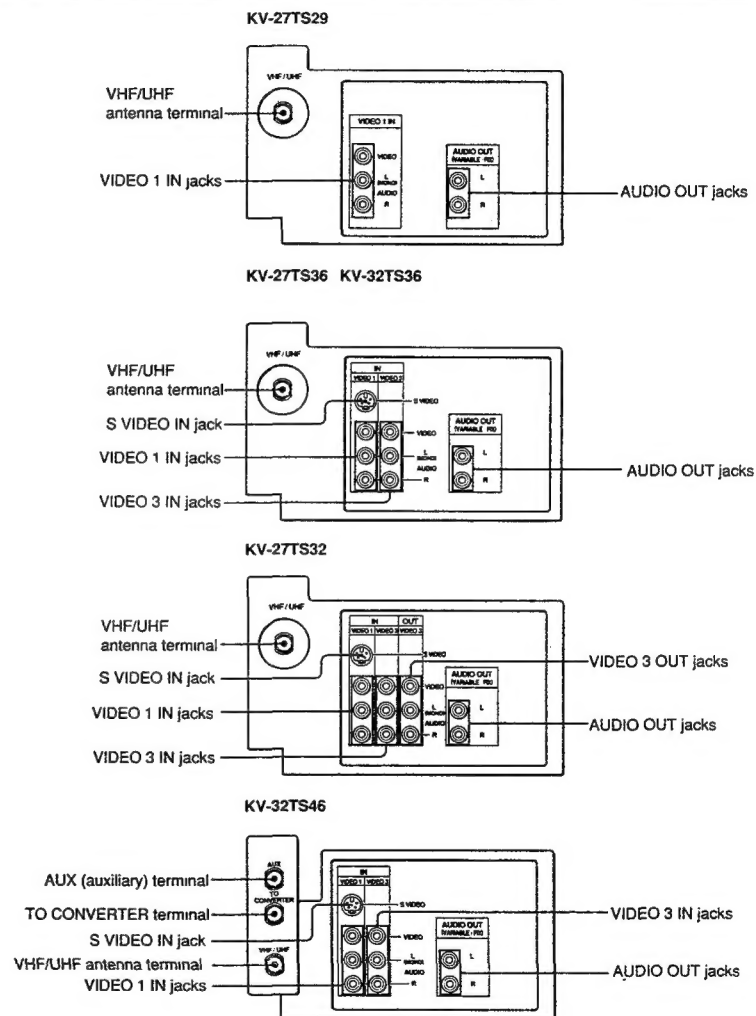
KV-32TS36
(The screen displays, except for certain features as noted above, are the same for all models.)

Front Panel



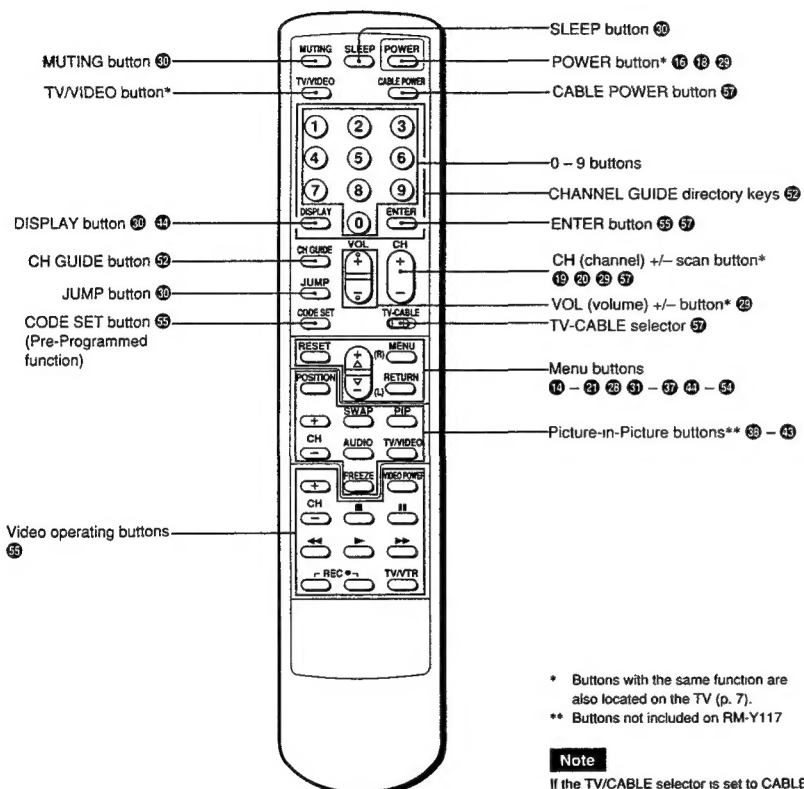
- * Buttons with the same function are also located on the Remote Commander (pp. 10 – 11).
** If you press this button, functions and menus are displayed one by one. Press any button to stop DEMO.

Rear Panel



Remote Commander

For details, see the pages indicated by the numbered black circles ●.

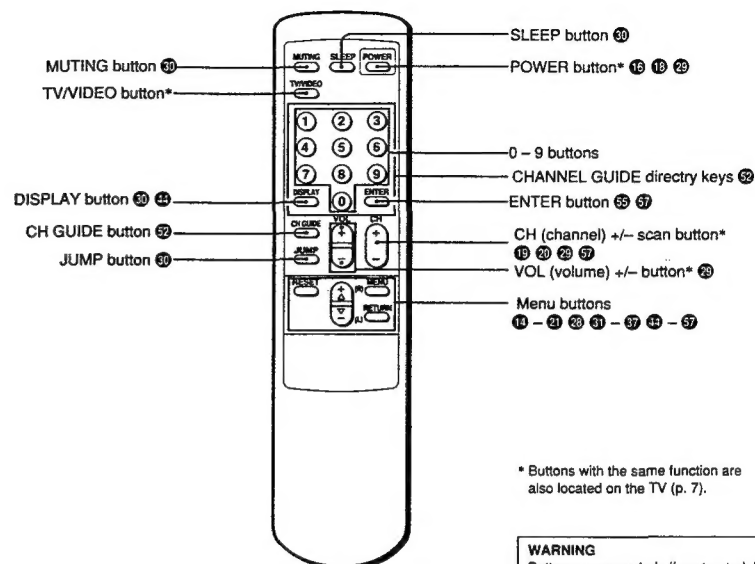


RM-Y118: KV-27TS36 KV-32TS36
KV-32TS46
(RM-Y117: KV-27TS32)

- * Buttons with the same function are also located on the TV (p. 7).
- ** Buttons not included on RM-Y117

Note

If the TV/CABLE selector is set to CABLE, the Remote Commander is able to control a connected cable box, not the TV. Set the selector to TV to control the TV set with the Remote Commander (You can use POWER button at any case).



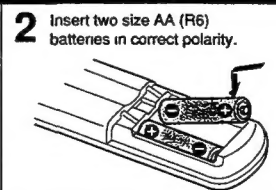
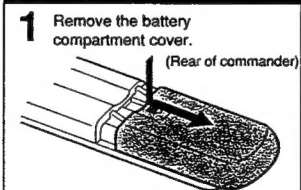
RM-Y116: KV-27TS29

* Buttons with the same function are also located on the TV (p. 7).

WARNING
Batteries may explode if mistreated. Do not recharge, disassemble, or dispose of in fire.

Installing Batteries

(RM-Y116)

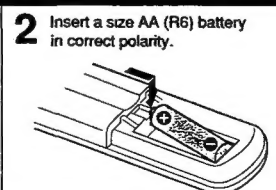
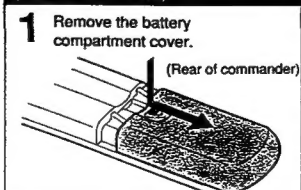


Battery life

With normal operation, batteries will last up to half a year. If the Remote Commander does not operate properly, the batteries might be exhausted. Replace both of them with new ones.

To avoid damage from possible battery leakage
Remove the batteries if you do not plan to use the Remote Commander for a fairly long time.

(RM-Y117, RM-Y118)



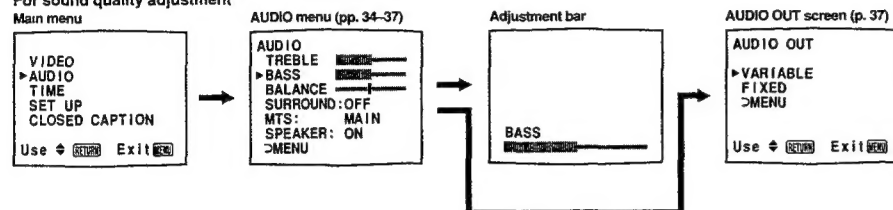
1-3. USING THE ON-SCREEN MENUS

The following flow chart shows the different levels of on-screen menus that you can use to make various adjustments and settings. See the indicated pages for instructions on using each feature.

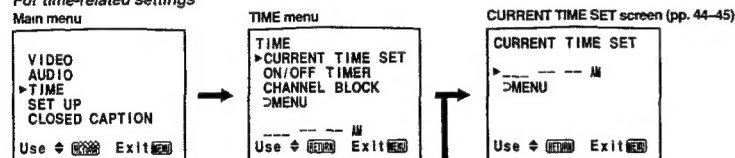
For picture quality adjustment



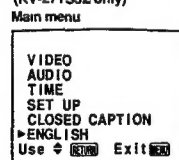
For sound quality adjustment



For time-related settings



For language setting (p.16) (KV-27TS32 only)



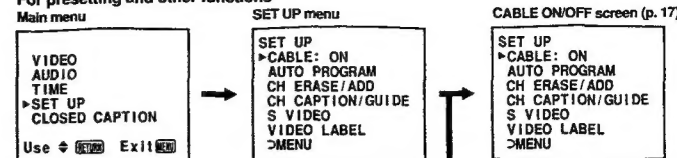
ON/OFF TIMER screen (pp. 46-47)



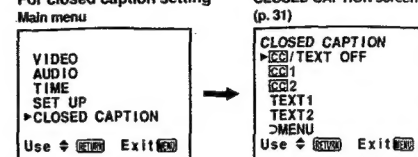
CHANNEL BLOCK screen (pp. 48-49)



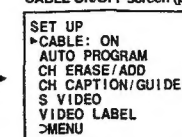
For presetting and other functions



For closed caption setting



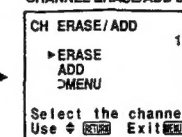
CABLE ON/OFF screen (p. 17)



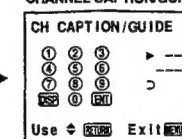
AUTO PROGRAM screen (p. 18)



CHANNEL ERASE/ADD screen (pp. 19-21)



CHANNEL CAPTION/GUIDE screen (pp. 50-51)



S VIDEO ON/OFF screen (p. 28)

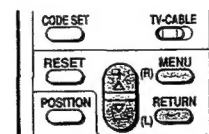


VIDEO LABEL screen (pp. 53-54)



Navigating through the Menus

Remote Commander



To display the main menu
Press MENU.

To return to the previous menu
Press Δ+ or ∇- to select "> MENU."
Then press RETURN.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

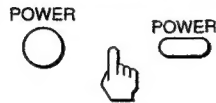
Note

The menus disappear automatically if you do not press a button within 90 seconds.
The menu you cannot select appears in black.

Changing the Menu Language (KV-27TS32/2970RS only)

The menu language is factory-set to ENGLISH. Follow these instructions to change the menu language to Spanish or back to English.

- 1 Press POWER on the TV or the Remote Commander to turn the TV on.



- 2 Press MENU. The main menu appears.



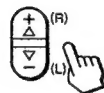
VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
ENGLISH
Use Δ ∇ Exit

- 3 Press Δ or ∇ to select ENGLISH. Then press RETURN.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
ENGLISH
Use Δ ∇ Exit

- 4 Press Δ or ∇ to select language. Each time you press Δ or ∇ , ESPAÑOL and ENGLISH menus appear.



VIDEO
AUDIO
TIME
AJUSTES
CLOSED CAPTION
ESPAÑOL
Usar Δ ∇ Salir

VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
ENGLISH
Use Δ ∇ Exit

Note

Certain parts of the ESPAÑOL menus remain in English.

- 5 Press RETURN. The language is selected.



VIDEO
AUDIO
HORA
AJUSTES
CLOSED CAPTION
ESPAÑOL
Usar Δ ∇ Salir

Spanish menu

1-4. TURNING THE CABLE MODE ON OR OFF

All of the controls are on the Remote Commander.

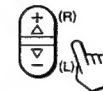
If you have cable connected to your TV (pp.12-13), follow the steps below to turn the cable connection on or off. CABLE is preset to ON when you use your TV for the first time. Then turn CABLE to OFF to preset or watch VHF or UHF channels (pp.18-21 and 29).

- 1 Press MENU. The main menu appears.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Δ ∇ Exit

- 2 Press Δ or ∇ to select SET UP.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Δ ∇ Exit

Press RETURN. The SET UP menu appears, and the cursor points to "CABLE".



SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
>MENU

Note
If the CABLE display appears in black, the TV is in VIDEO mode and you cannot select CABLE. Press TV/VIDEO to change to TV mode.

- 3 Press RETURN again.



SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
>MENU

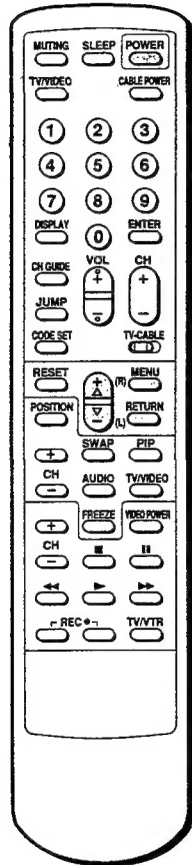
Press Δ or ∇ to select ON or OFF alternately.

SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
>MENU



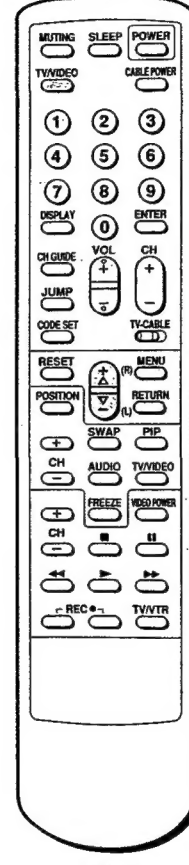
SET UP
CABLE: OFF
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
>MENU

Press RETURN. The setting is completed.



RM-Y118

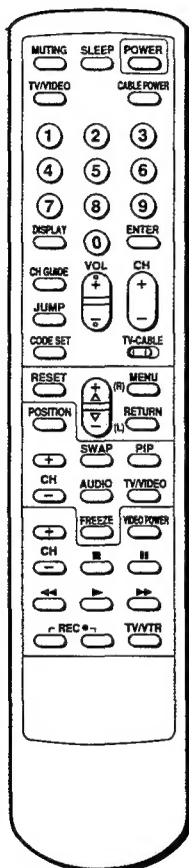
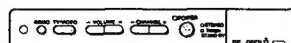
To return to the normal screen
Press MENU.



RM-Y118

To return to the normal screen
Press MENU.

1-5. PRESETTING TV CHANNELS



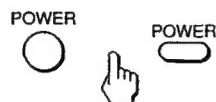
RM-Y118

Channels that can be received on this TV:

VHF	UHF	Cable
2-13	14-69	1-125

Presetting TV Channels Automatically

- 1 Press POWER on the TV or the Remote Commander to turn the TV on.



- 2 Set the cable connection on or off, depending on if you want to preset cable or VHF/UHF channels.
(Follow the steps in "Turning the Cable Mode On or Off", p.17)

If "VIDEO" is displayed on the screen, press the TV/VIDEO button on the TV or the Remote Commander so that a channel number appears.

- 3 Press MENU.
The main menu appears.



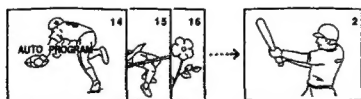
VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Δ RETURN Exit

- 4 Press Δ or ∇ to select SET UP.
Then press RETURN.
The SET UP menu appears.



SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
>MENU

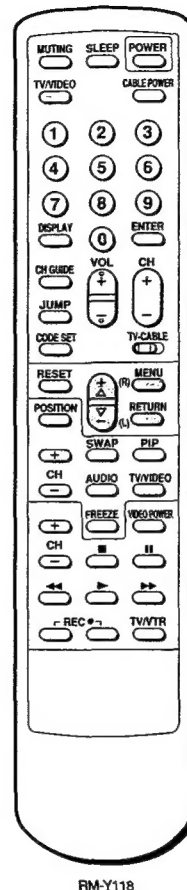
- 5 Press Δ or ∇ to select AUTO PROGRAM.
Then press RETURN.



SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
>MENU

"AUTO PROGRAM" appears on the screen and receivable channels (other than the channels already preset) are preset in numerical sequence. The channels previously preset will not remain in the TV's memory.
When no more channels can be found, the programming stops and the lowest numbered channel is displayed.

To erase unnecessary channels, or to add channels that could not be preset automatically because their signal was too weak, follow the steps in "Erasing Unnecessary Channels — CHANNEL ERASE" (pp.19-20) and "Presetting Only Desired Channels — CHANNEL ADD" (p. 21).



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Erasing Unnecessary Channels—CHANNEL ERASE

Use this feature to erase unnecessary TV channels, so that when you press CH Δ or ∇ , the channel(s) are skipped.

- 1 Press MENU.
The main menu appears.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Δ RETURN Exit

- 2 Press Δ or ∇ to select SET UP



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Δ RETURN Exit

Press RETURN.
The SET UP menu appears.



SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
>MENU

- 3 Press Δ or ∇ to select CH ERASE/ADD.



SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
>MENU

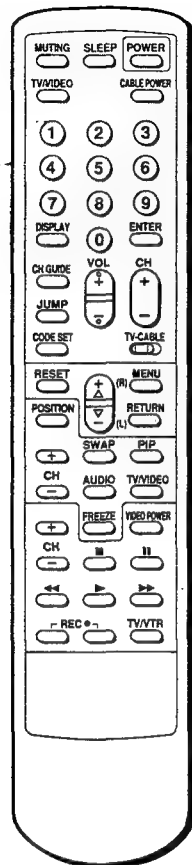
Press RETURN.
The CH ERASE/ADD screen appears, and the cursor points to "ERASE".



CH ERASE/ADD
ERASE
ADD
>MENU
Select the channel
Use Δ RETURN Exit

Note

If CH ERASE/ADD display appears in black, the TV is in video mode and you cannot select CH ERASE/ADD.
Press TV/VIDEO to change to TV mode.



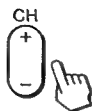
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To return to the normal screen
Press MENU.

Note

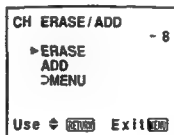
When you erase a VHF or UHF channel, the cable TV channel with the same number is also erased, and vice versa.

- Press the CH +/- button to select the channel you want to erase.
For example, to erase channel 8, press CH +/- until 8 appears.



Press RETURN.

A "-" sign appears in front of the channel number display, indicating that the channel is erased from the channel scan memory.



The next time you press the CH +/- buttons, channel 8 will be skipped.

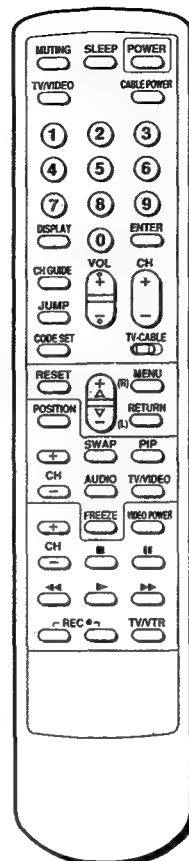
To erase other channels
Repeat step 4.

Cable TV channel chart*

Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

Number on this TV	Corresponding cable TV channel	Number on this TV	Corresponding cable TV channel
1	A-8	33	T
5	A-7	34	U
6	A-6	35	V
14	A	36	W
15	B	37	W+1
16	C	38	W+2
17	D	39	W+3
18	E	40	W+4
19	F	41	W+5
20	G	42	W+6
21	H	43	W+7
22	I	44	W+8
23	J	45	W+9
24	K	46	W+10
25	L	47	W+11
26	M	48	W+12
27	N	49	W+13
28	O	50	W+14
29	P	51	W+15
30	Q	52	W+16
31	R	53	W+17
32	S	54	W+18
		55	W+19
		56	W+20
		57	W+21
		58	W+22
		59	W+23
		60	W+24
		61	W+25
		62	W+26
		63	W+27
		64	W+28
		65	W+29
		66	W+30
		67	W+31
		68	W+32
		69	W+33
		70	W+34
		71	W+35
		72	W+36
		73	W+37
		74	W+38
		75	W+39
		76	W+40
		77	W+41
		78	W+42
		79	W+43
		80	W+44
		81	W+45
		82	W+46
		83	W+47
		84	W+48
		85	W+49
		86	W+50
		87	W+51
		88	W+52
		89	W+53
		90	W+54
		91	W+55
		92	W+56
		93	W+57
		94	W+58
		95	W+59
		96	W+60
		97	W+61
		98	W+62
		99	W+63
		100	W+64

* This designation of cable TV channels conforms to the EIA/NCTA recommendation. Check with your local cable TV company for more complete information on the available channels.



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To return to the normal screen
Press MENU.

Note

If you add a VHF or UHF channel, the cable TV channel with the same number is also added, and vice versa.

Presetting Only Desired Channels—CHANNEL ADD

Use this feature to add channels one by one to the channel scan memory.

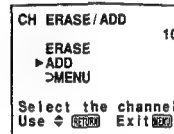
1-3

(Follow steps 1-3 in "Erasing Unnecessary Channels—CHANNEL ERASE," p.19.)

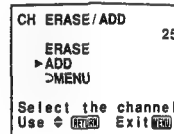
Note

If the CH ERASE/ADD display appears in black, the TV is in video mode and you cannot select CHANNEL ERASE/ADD. Press TV/VIDEO to change to TV mode.

- Press Δ + or ∇ - to select ADD.

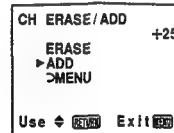


- Press 0-9 and ENTER to select the channel you want to add.
For example, to add channel 25, press 2, 5 and ENTER.



Press RETURN.

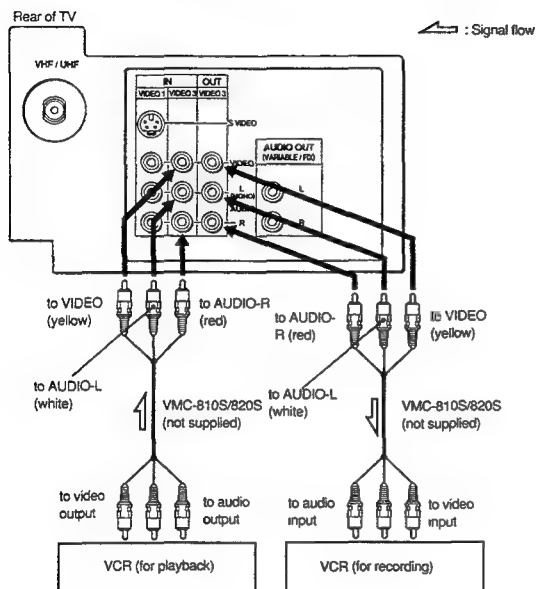
A "+" sign appears in front of the channel number display, indicating that the channel is added to the channel scan memory.



To add other channels
Repeat step 5.

1-6. CONNECTING OTHER EQUIPMENT

Connecting two VCRs for tape editing (KV-27TS32 only)



Watching a different image while duplicating

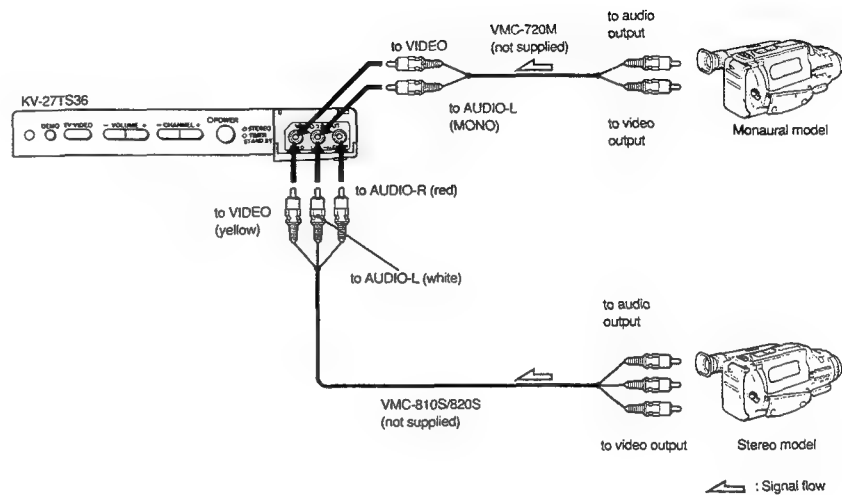
You can duplicate your recorded tapes by connecting two VCRs. The VIDEO 3 OUT jacks only output the signal from the VIDEO 3 IN jacks. Connect a VCR for playback to VIDEO 3 IN jacks, and a VCR for recording to the VIDEO 3 OUT jacks. You can watch a TV program or images from VIDEO 1 IN or VIDEO 2 IN during duplicating.

To watch a different input image

Press TV/VIDEO on the TV or on the Remote Commander to select the input image you want to watch.

Connecting camcorders (except for KV-27TS29)

Playing back recorded tapes

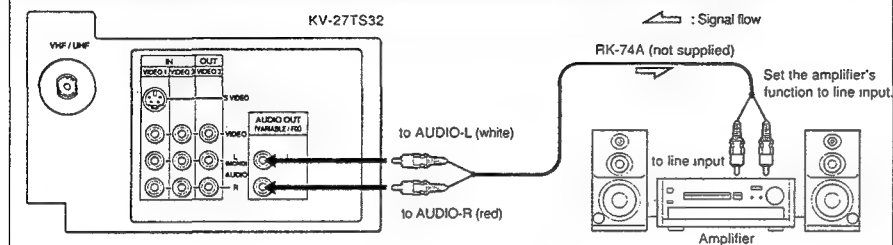


Preparing for use

Same as p. 23.

Audio System

Listening to TV or connected VCR sound through an audio system



Preparing for use

Display the mode set menu and set **SPEAKER** to **OFF** to cut off the TV speaker sound (p. 37), and listen to the TV's sound solely through the audio system speakers.

Note

By setting **AUDIO OUT** variable, you can adjust the bass, treble and balance, or select surround or an MTS (Multichannel TV Sound) mode, using the on-screen menus (pp. 34–36).

Connecting active super woofer (supplied with KV-32TS46 only)

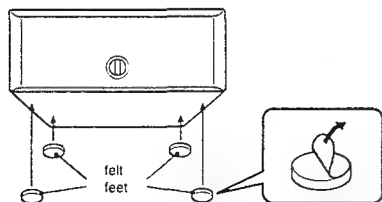
Preparing for use

To enjoy the active super woofer sound, make sure the connections are made as illustrated on the next page.

The woofer volume varies according to the TV volume. Adjust the woofer level control properly.

The active super woofer outputs the signal input to its **AUDIO IN** jacks. If you connect an audio system to the active super woofer's **AUDIO OUT** jacks, you can enjoy the sound from the audio system and the active super woofer simultaneously.

To make the active super woofer stable, attach the felt feet (supplied) to the bottom.

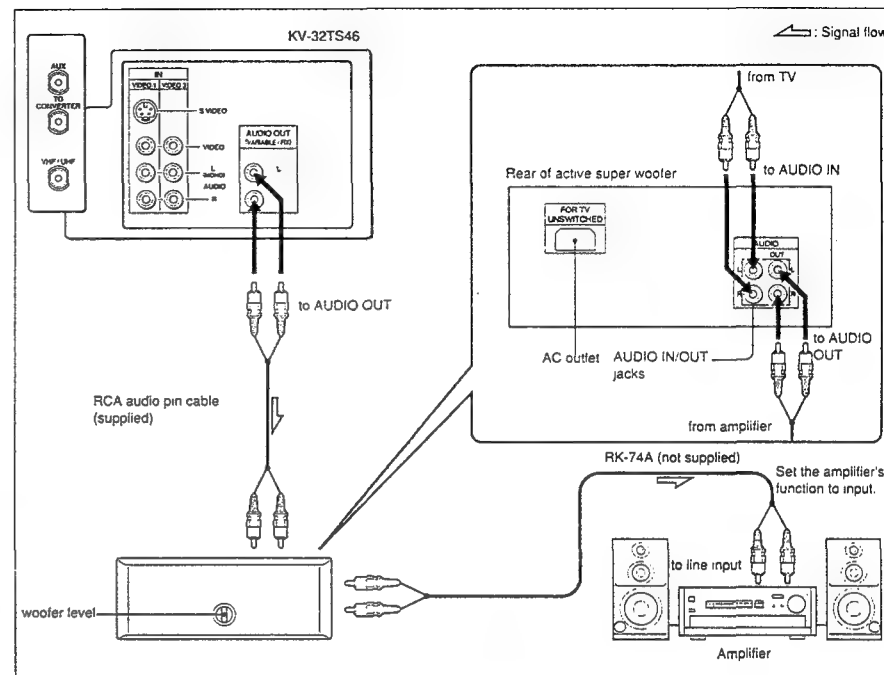


Notes

- Do not place the woofer on the TV set. To enjoy good sound, place the woofer on a hard object near the TV avoiding soft objects like carpets, sofas, etc.
- If you do not use the TV for more than 20 seconds, the active super woofer is turned off automatically to save on power consumption.
- When you release **MUTING**, the sound of the woofer is heard before that of the TV. This is normal.
- If you set **SPEAKER** to **OFF** in the **AUDIO** menu and select **FIX** in the **AUDIO OUT** menu (p.37), the volume of the woofer may be excessive. We recommend that you set **SPEAKER** to **ON** when you use the active super woofer.
- You should only connect the KV-32TS46 to the AC outlet on the active super woofer.

Active Super Woofer Specification

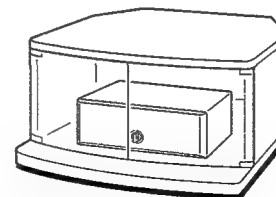
Input: 500 mVrms (100% modulation)
 Output: 500 mVrms (100% modulation)
 Impedance: 20 kilohms
 Speaker output: 9 W (100 Hz)
 Dimensions: 435 × 165 × 164 mm (W × H × D)
 (17 1/4 × 6 1/2 × 6 1/2 in.)
 Mass: 3.9 kg
 (8 lbs 10 oz)



Using TV stand

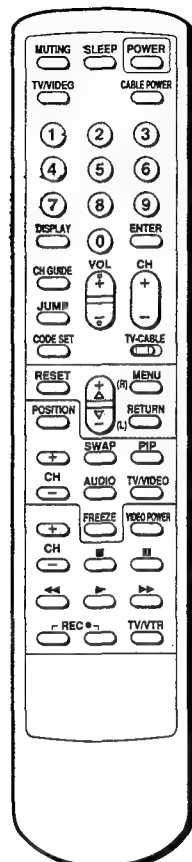
When you place the active super woofer on a TV stand (not supplied), remove the rear panel of the stand.

Sony or other manufacture's stand



Note

For good sound quality, avoid placing the stand in front of a curtain or close to a wall.



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To return to the normal screen
Press MENU.

Note

If you set S VIDEO to ON, the TV automatically receives S video signals whenever a VCR with S video is connected.

**Watching a Video with Your S Video-Equipped VCR
(except for KV-27TS29/2970RS)**

Use this feature to set S VIDEO to ON or OFF depending on the kind of video equipment you have connected to the TV. For instructions on connecting video equipment, see pp.22-25.

Note

If the TV is in TV, VIDEO 2 or VIDEO 3 mode, the S VIDEO display appears in black and cannot be selected.

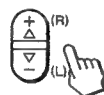
Press TV/VIDEO to change to VIDEO 1 mode.

- 1** Press MENU.
The main menu appears.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use \leftarrow \rightarrow Exit

- 2** Press Δ or ∇ to select SET UP



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use \leftarrow \rightarrow Exit

Press RETURN.
The SET UP menu appears.



SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO: ON
VIDEO LABEL
>MENU

- 3** Press Δ or ∇ to select S VIDEO.
Then press RETURN.



SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO: ON
VIDEO LABEL
>MENU

Press Δ or ∇ to select ON or OFF alternately.

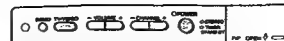
SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO: ON
VIDEO LABEL
>MENU



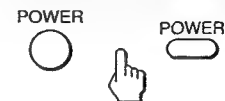
SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO: OFF
VIDEO LABEL
>MENU

Press RETURN.
The setting is completed.

1-7. WATCHING TV PROGRAMS



- 1** Press POWER on the TV or the Remote Commander to turn the TV on.
The TIMER/STAND BY indicator blinks until the picture appears.



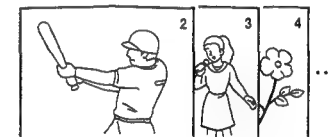
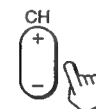
- 2** Turn the cable mode on or off to select the type of channel you want to watch, VHF/UHF or cable TV.
(Follow the steps in "Turning the Cable Mode On or Off," p. 17.)

If "VIDEO" or "S VIDEO" is displayed on the screen, press the TV/VIDEO button on the TV or on the Remote Commander so that the channel number appears.

- 3** Select a channel in one of the following two ways:

To scan the preset channels* in numerical sequence

Press CH \leftarrow \rightarrow

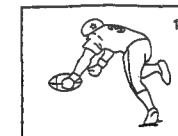


* For more information on presetting channels, see pp. 18 - 21.

To select a channel directly

Press 0 - 9 and ENTER.

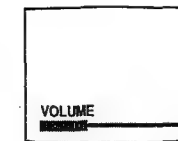
For example, to select channel 14, press 1, 4 and ENTER.



- 4** Press VOL \leftarrow \rightarrow to adjust the volume.



The display will disappear automatically after 3 seconds.

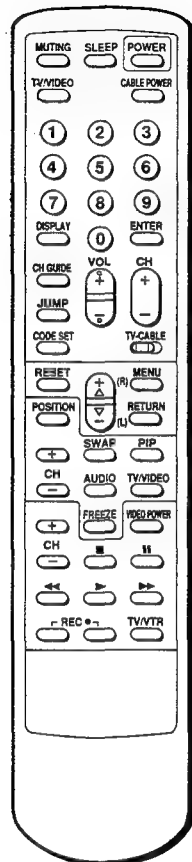


Press \leftarrow to increase the volume.
Press \rightarrow to decrease the volume.

To turn off the TV

Press POWER on the TV or the Remote Commander again.

1-8. USING CONVENIENT FEATURES



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Muting the Sound — MUTING

Press **MUTING**.
The display "MUTING" will appear on the screen.



To restore the sound
Press **MUTING** again, or press **VOL +**.

Keeping the Displays On-Screen — DISPLAY

To display the channel
Press **DISPLAY**.
All the existing displays appear: channel number, channel caption (if set), MTS mode ("SAP" only), window picture input mode and the current time ("AM" or "PM" disappears after about three seconds).



To cancel the display
Press **DISPLAY** again.
The channel display will disappear.

Using the Sleep Timer — SLEEP

The sleep timer turns off the TV automatically after the amount of time you select.

Press **SLEEP**.
Each time you press **SLEEP**, the time increments "30", "60", "90" and "OFF" mode appear in sequence.



SLEEP 30
SLEEP 60
SLEEP 90
SLEEP OFF

The **SLEEP** display appears about one minute before the TV turns off.

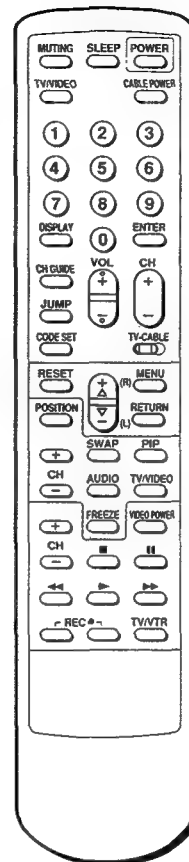
To cancel the setting
Press **SLEEP** until "OFF" mode appears.
The "SLEEP OFF" display appears for about three seconds.
OR
Turn the TV off.
The sleep timer setting is cancelled.

Switching Quickly Between Two Channels—JUMP

Press **JUMP** once to recall the channel you were watching previously. Press **JUMP** again to switch back. Use this feature to keep track of two programs alternately.



1-9. USING CLOSED CAPTION (U.S.A. models only)



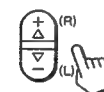
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1 Press **MENU**.
The main menu appears.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use **Δ** **▽** Exit **RETURN**

2 Press **Δ+** or **▽-** to select **CLOSED CAPTION**.
Then press **RETURN**.
The **CLOSED CAPTION** screen appears.



CLOSED CAPTION
CC/TEXT OFF
CC1
CC2
TEXT1
TEXT2
MENU
Use **Δ** **▽** Exit **RETURN**

3 Press **Δ+** or **▽-** to select closed caption mode.



Select **CC1** or **CC2** to view Captions.
A Caption is a printed version of the dialogue or sound effects of a program. (The mode should be set to **CC1** for most programs.)

CLOSED CAPTION
CC/TEXT OFF
CC1
CC2
TEXT1
TEXT2
MENU
Use **Δ** **▽** Exit **RETURN**

Select **TEXT1** or **TEXT2** to view Text.
Text is information that is presented using the half to full television screen. It is usually not related to the program.

CLOSED CAPTION
CC/TEXT OFF
CC1
CC2
TEXT1
TEXT2
MENU
Use **Δ** **▽** Exit **RETURN**

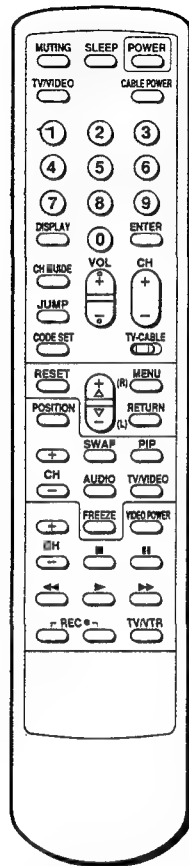
Select **CC/TEXT OFF** if you do not want to use the **CLOSED CAPTION** mode.

CLOSED CAPTION
CC/TEXT OFF
CC1
CC2
TEXT1
TEXT2
MENU
Use **Δ** **▽** Exit **RETURN**

Press **RETURN**.
The setting is completed.



1-10. WATCHING TWO PICTURES AT ONCE (Picture-in-Picture)



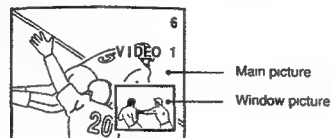
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Note

To operate your VCR with the supplied Remote Commander, See "Using the Pre-Programmed Remote Commander", pp. 55-57.

You can watch both the main picture and a window picture simultaneously by using the Picture-in-Picture (PIP) function. Model KV-32TS46 is equipped with two-tuner PIP, allowing you to watch two TV channels at once.

Other models are equipped with one-tuner PIP. To watch two different TV channels, you must first connect a VCR to the TV, to watch a second TV channel through the VCR tuner. (See "Connecting Other Equipment", pp. 22-27.)



Picture-in-Picture special features

When watching the main picture and a window picture, you can:

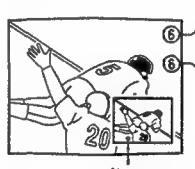
- Swap the main and window pictures (SWAP).
- Change the position of the window picture (POSITION).
- Display a still picture as a window (FREEZE).
- Choose the sound from the main or window picture (AUDIO).

Displaying a window picture—PIP

Press PIP to display a window picture

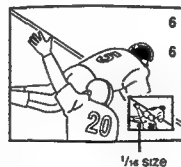


Input-source mode or TV channel for the main picture



Input-source mode or TV channel for the window picture

Press PIP again to display a smaller window picture



To disappear the window picture
Press PIP once more.

Changing the window picture input mode

1 Press PIP to display a window picture.



2 Press TV/VIDEO in the Picture-in-Picture control area to select the input mode.

Each time you press TV/VIDEO, "TV", "VIDEO 1", "VIDEO 2" and "VIDEO 3" appear in sequence.



A window picture will appear in the same input mode as the last time you used PIP

To receive the window picture sound

Press AUDIO.

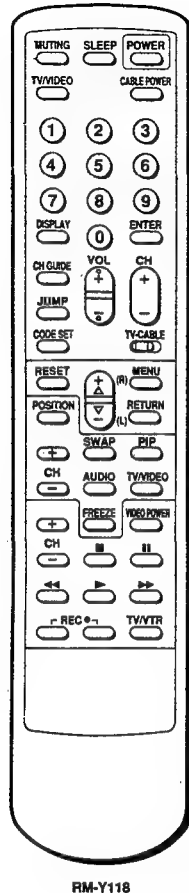
The  display appears for a few seconds, indicating that the window picture sound is being received.



To restore the main picture sound
Press AUDIO again.

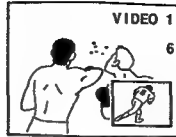
Notes

- If the main picture is not receiving an image, the window picture may be in black and white.
- When you turn PIP on or when you turn the TV on with PIP mode on the window picture will appear at the bottom right of the screen.
- The window picture may be affected by the condition of the main picture.
- The window picture sound is also output from the VARIABLE/FIX AUDIO OUT jacks.

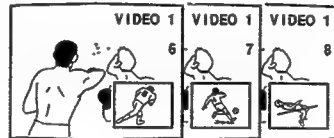
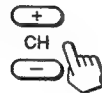


Changing TV channels in the window picture

1 Press PIP to display a window picture.



2 Press CH +/- in the PIP control area.

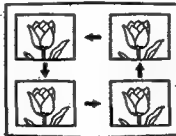


Changing the position of the window picture—POSITION

1 Press PIP to display a window picture.



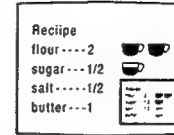
2 Press POSITION.
Each time you press POSITION, the window picture will move counterclockwise on the screen, as illustrated below.



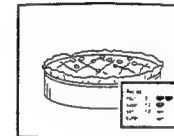
Displaying a still picture — FREEZE

Use the FREEZE function to display a still picture as a window. This function is useful when you want to write down a recipe from a cooking program, a displayed address or a phone number and so on.

1 Press PIP to display a window picture.



2 Press FREEZE.
The window picture image remains still on the screen.



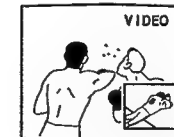
To restore the normal picture
Press FREEZE again.

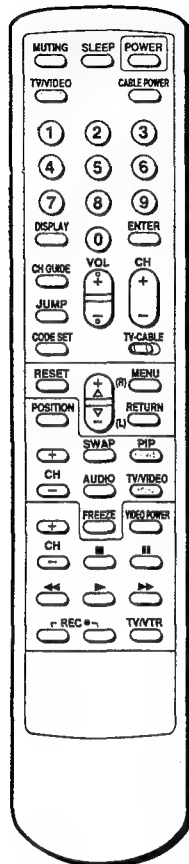
Swapping the main and window pictures — SWAP

1 Press PIP to display a window picture.



2 Press SWAP.
Each time you press SWAP, the images from the main and window pictures switch places.



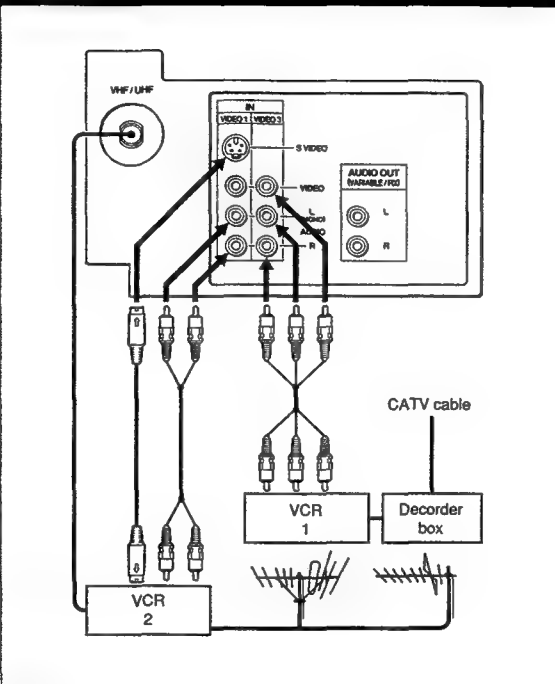


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Displaying a pay cable TV channel as a window picture

To display a pay cable TV channel as a window picture, connect your decoder box as illustrated below.

Connection



Note

The channels being received through the AUX terminal cannot be displayed as a window picture. (KV-32TS46 only)

After making the connections, turn the cable mode on by following the steps "Turning the Cable Mode On or Off", p. 17. Then continue with steps below.

- 1 Press PIP to display a window picture.



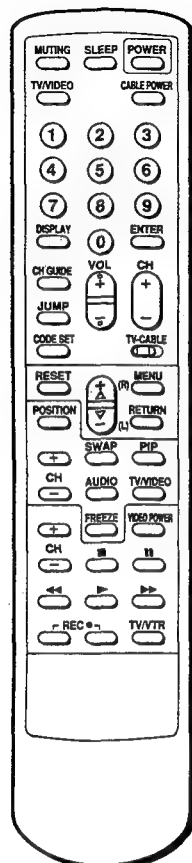
- 2 Press TV/VIDEO in the Picture-in-Picture control area to select the input mode.
Each time you press TV/VIDEO, "TV", "VIDEO 1", "VIDEO 2" and "VIDEO 3" appear in sequence.



- 3 Put your VCR on an inactive channel (CH 3 or 4).

- 4 Change pay cable TV channels with the decoder box.

1-11. USING THE TIMER-ACTIVATED FUNCTIONS



RM-Y118

Setting the Clock—CURRENT TIME SET

Follow these instructions to set the current time. The correct time must be set in order to use the timer-activated functions (ON/OFF TIMER, CHANNEL BLOCK).

EXAMPLE: Set the time to 3:15 PM, Monday.

- 1** Press MENU.
The main menu appears.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Exit

- 2** Press Δ or ∇ to select TIME.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Exit

Press RETURN.
The TIME menu appears, and the cursor points to "CURRENT TIME SET"



TIME
CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
MENU
Use Exit

- 3** Press RETURN.
The CURRENT TIME SET screen appears.



CURRENT TIME SET
MON 12:00 AM
MENU
Use Exit

- 4** Press RETURN again.
"Set the day." appears on the screen.



CURRENT TIME SET
SUN 12:00 AM
MENU
Set the day.
Use Exit

- 5** Press Δ or ∇ to set the day.
Each time you press Δ or ∇ , the day changes consecutively.



Press RETURN.
"Set the time." appears on the screen.



CURRENT TIME SET
MON 12:00 AM
MENU
Set the time.
Use Exit

- 6** Press Δ or ∇ to set the hour.
Each time you press Δ or ∇ , the hour changes starting with "12:00 AM."



Press RETURN.



CURRENT TIME SET
MON 3:00 PM
MENU
Set the time.
Use Exit

- 7** Press Δ or ∇ to set the minutes.
Each time you press Δ or ∇ , the minutes change in sequence.



Press RETURN.
The setting is completed, and the clock starts.



CURRENT TIME SET
MON 3:15 PM
MENU
Set the time.
Use Exit

CURRENT TIME SET
MON 3:15 PM
MENU
Use Exit

To reset the time
Press RESET while in the CURRENT TIME screen, and repeat steps 4-7.

To display the time
Press DISPLAY.

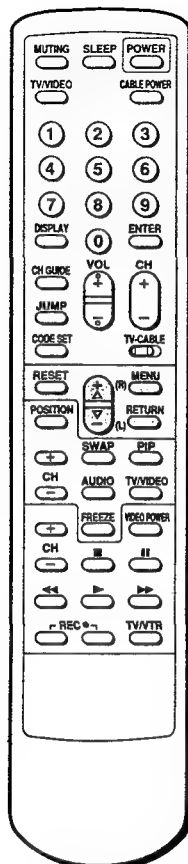
To return to the normal screen
Press MENU.

Notes

- The internal clock of this TV operates on a 12-hour cycle. If a 24-hour cycle number (for instance, 13:00) is entered, it will be cleared when you press RETURN.

12:00 AM stands for midnight.
12:00 PM stands for noon.

- All the settings including CURRENT TIME SET will be erased if you unplug the TV or a power failure occurs. Reset the current time by following steps 1-7.



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Setting the ON/OFF TIMER

With this function you can set your favorite program to appear on the screen at the time that you set.

EXAMPLE: Set the timer to turn on the TV every Monday through Friday at 3:15 PM for 2 hours, on channel 21.

- 1 Press MENU.
The main menu appears.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Exit

- 2 Press Δ or ∇ to select TIME.
Then press RETURN.
The TIME menu appears.



TIME
CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
MENU
MON 3:15 H
Use Exit

- 3 Press Δ or ∇ to select ON/OFF TIMER.
Then press RETURN.
The ON/OFF TIMER screen appears.



ON/OFF TIMER
EVERY SUN-SAT
12:00M _h CH_
MENU
Use Exit

Note

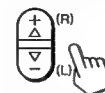
If the ON/OFF TIMER display appears in black, the current time has not been set and you cannot select ON/OFF TIMER. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 44–45.

- 4 Press RETURN again.
"Set the day." appears on the screen.



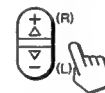
ON/OFF TIMER
EVERY SUN-SAT
12:00M _h CH_
MENU
Set the day.
Use Exit

- 5 Press Δ or ∇ to set the day.
Each time you press Δ or ∇ , the days of the week change as shown in Fig. 1.
Then press RETURN.
"Set the time." appears on the screen.



ON/OFF TIMER
EVERY MON-FRI
12:00M _h CH_
MENU
Set the time.
Use Exit

- 6 Press Δ or ∇ to set the hour that you want the TIMER to start.
Each time you press Δ or ∇ , the hour changes in sequence.
Then press RETURN.



ON/OFF TIMER
EVERY MON-FRI
3:00M _h CH_
MENU
Set the time.
Use Exit

- 7 Press Δ or ∇ to set the minutes.
Each time you press Δ or ∇ , the minutes change in sequence.
Then press RETURN.
"Set the duration." appears on the screen.



ON/OFF TIMER
EVERY MON-FRI
3:15M _h CH_
MENU
Set the duration.
Use Exit

- 8 Press Δ or ∇ to set the duration of time.
Each time you press Δ or ∇ , the duration changes from "1" to "6" in sequence.
Then press RETURN.
"Select the channel" appears on the screen.



ON/OFF TIMER
EVERY MON-FRI
3:15M 2h CH_
MENU
Select the channel!
Use Exit

- 9 Press Δ or ∇ to set the channel that you want the TV to tune in.
Each time you press Δ or ∇ , the channel number changes from 1 to 125 in sequence.



ON/OFF TIMER
EVERY MON-FRI
3:15M 2h CH 21
MENU
Select the channel!
Use Exit

Press RETURN.
The setting is completed, and the TIMER indicator on the front of the TV lights up.



ON/OFF TIMER
EVERY MON-FRI
3:15M 2h CH 21
MENU
Use Exit

To clear the ON/OFF TIMER setting
Press RESET while in the ON/OFF TIMER screen.

To return to the normal screen
Press MENU.

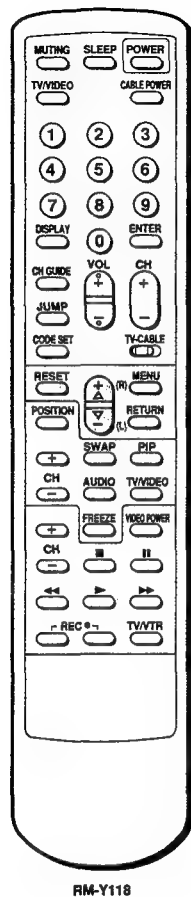
Notes

- While the TIMER is set, the TIMER indicator on the TV is on.
- One minute before the timer goes off, the "TV will turn off" display will appear on the screen.
- All the settings including ON/OFF TIMER will be erased if you unplug the TV or a power failure occurs. Reset the ON/OFF TIMER by following steps 1-9.
- If you have not set the clock correctly, the ON/OFF TIMER will not operate at the proper time. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 44–45.

Fig. 1
Selecting the day(s) of the week
When you press Δ , the days of the week appear in the following order.



(V-: reverse order)



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Setting CHANNEL BLOCK

Use this function to block a channel from appearing on the screen during the time you specify. You can use this function to prevent children from watching undesirable programs.

EXAMPLE: Set CHANNEL BLOCK every Sunday at 8:45 PM for one hour, on channel 38.

- 1** Press MENU.
The main menu appears.



VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Exit

- 2** Press Δ or ∇ to select TIME.
Then press RETURN.
The TIME menu appears.



TIME
CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
>MENU
MON 3:15 PM
Use Exit

- 3** Press Δ or ∇ to select CHANNEL BLOCK.
Then press RETURN.
The CHANNEL BLOCK screen appears.



CHANNEL BLOCK
EVERY SUN-SAT
12:00M _h CH____
>MENU
Use Exit

Note

If the CHANNEL BLOCK display appears in black, the current time has not been set and you cannot select CHANNEL BLOCK. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 44–45.

- 4** Press RETURN again.
"Set the day." appears on the screen.



CHANNEL BLOCK
EVERY SUN-SAT
12:00M _h CH____
>MENU
Set the day.
Use Exit

- 5** Press Δ or ∇ to set the day.
Each time you press Δ or ∇ , the days of the week change as shown in Fig. 1.(See p. 47.)
Then press RETURN.
"Set the time." appears on the screen.



CHANNEL BLOCK
SUNDAY
12:00M _h CH____
>MENU
Set the time.
Use Exit

- 6** Press Δ or ∇ to set the hour.
Each time you press Δ or ∇ , the hour changes in sequence.
Then press RETURN.



CHANNEL BLOCK
SUNDAY
8:00PM _h CH____
>MENU
Set the time.
Use Exit

- 7** Press Δ or ∇ to set the minutes.
Each time you press Δ or ∇ , the minutes change in sequence.
Then press RETURN.
"Set the duration." appears on the screen.



CHANNEL BLOCK
SUNDAY
8:45PM _h CH____
>MENU
Set the duration.
Use Exit

- 8** Press Δ or ∇ to set the duration of time that you want the TV remain blocked.
Each time you press Δ or ∇ , the duration changes from 1 to 6 in sequence.
Then press RETURN.
"Select the channel" appears on the screen.



CHANNEL BLOCK
SUNDAY
8:45PM 1h CH____
>MENU
Select the channel
Use Exit

- 9** Press Δ or ∇ to set the channel that you want to block.
Each time you press Δ or ∇ , the channel number changes from 1 to 125 in sequence.



Press RETURN.
The setting is completed.



CHANNEL BLOCK
SUNDAY
8:45PM 1h CH 38
>MENU
Select the channel
Use Exit

CHANNEL BLOCK
SUNDAY
8:45PM 1h CH 38
>MENU
Use Exit

If you select a channel which has been blocked, the message of "BLOCKED" appears.

BLOCKED

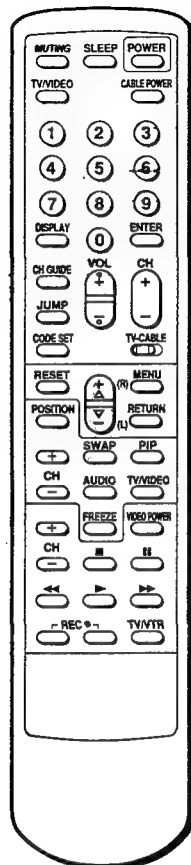
To clear the BLOCK setting
Press RESET while in the CHANNEL BLOCK screen.

To return to the normal screen
Press MENU.

Notes

- If you set a new CHANNEL BLOCK by following steps 1-9, the original setting will be erased.
- If you have not set the clock correctly, CHANNEL BLOCK will not operate at the proper time. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 44–45.

1-12. CUSTOMIZING THE SCREEN DISPLAY



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Setting Channel Captions — CH CAPTION

Use this feature to caption up to 12 channel number displays with the matching channel call letters.

EXAMPLE: Caption channel 20 with ESPN at the caption position number 4.

- Press MENU.
The main menu appears.



► VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use Exit

- Press Δ or ∇ to select SET UP.
Then press RETURN.
The SET UP menu appears.



SET UP
► CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
>MENU

- Press Δ or ∇ to select CH CAPTION/GUIDE.
Then press RETURN.
The CH CAPTION/GUIDE screen appears.



CH CAPTION/GUIDE
1 2 3
4 5 6
7 8 9
0
Select a position.
Use Exit

Note

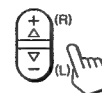
If the CH CAPTION display appears in black, the TV is in video mode and you cannot select CH CAPTION/GUIDE. Press TV/VIDEO to change to TV mode.

- Press RETURN again.
"Select a position." appears on the screen.



CH CAPTION/GUIDE
1 2 3
4 5 6
7 8 9
0
Select a position.
Use Exit

- Press Δ or ∇ to select a caption position number.
Each time you press Δ or ∇ , the caption position number is marked in sequence.
Then press RETURN.
"Select the channel" appears on the screen.



CH CAPTION/GUIDE
1 2 3
4 5 6
7 8 9
0
Select the channel.
Use Exit

- Press Δ or ∇ to select the channel you want to caption.
Each time you press Δ or ∇ , the channel number changes from 1 to 125.
Then press RETURN.
"Select the letter." appears on the screen.



CH CAPTION/GUIDE
1 2 3
4 5 6
7 8 9
0
Select the letter.
Use Exit

- Press Δ or ∇ to select the first letter.
Each time you press Δ or ∇ , "0-9", "A-Z", "&", "?", "-" and "(blank space)" appear in sequence.



CH CAPTION/GUIDE
1 2 3
4 5 6
7 8 9
0
Select the letter.
Use Exit

- Repeat step 7 to select each remaining letter.
(For a 3-letter caption, leave a space by pressing RETURN only.)



CH CAPTION/GUIDE
1 2 3
4 5 6
7 8 9
0
Select the letter.
Use Exit

- Press RETURN.
The setting is completed.



CH CAPTION/GUIDE
1 2 3
4 5 6
7 8 9
0
Use Exit

To caption other channels
Repeat steps 4-9.

To erase unneeded captions
Call the caption setting screen by following steps 1-5, and press RESET.

To return to the normal screen
Press MENU.

Viewing the Captioned Channels — CH GUIDE

Use this feature to display the captions you set, and to select a channel directory for viewing.

1 Press CH GUIDE.

A directory appears, corresponding to the directory keys on the Remote Commander.

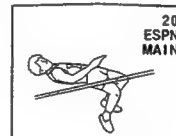
CH GUIDE



CHANNEL GUIDE									
① ABC	② DIS	③ CNN							
④ ESPN	⑤	⑥							
⑦	⑧	⑨							
⑩	⑪	⑫							

To cancel the CHANNEL GUIDE screen
Press CH GUIDE again.

2 Press the directory key of the channel you want to watch.



Setting VIDEO LABEL (except for KV-27TS29/2970RS)

Use this feature to label each input mode in order to identify the equipment connected to each input terminal.

EXAMPLE. Label VIDEO 1 IN as VHS.

1 Press MENU.

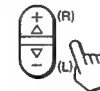
The main menu appears.

MENU



► VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use ◀ RETURN Exit ▶

2 Press Δ+ or ∇- to select SET UP.



VIDEO
AUDIO
TIME
► SET UP
CLOSED CAPTION
Use ◀ RETURN Exit ▶

Press RETURN.

The SET UP menu appears.

RETURN



SET UP
► CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO: ON
VIDEO LABEL
► MENU

3 Press Δ+ or ∇- to select VIDEO LABEL.



SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO: ON
► VIDEO LABEL
► MENU

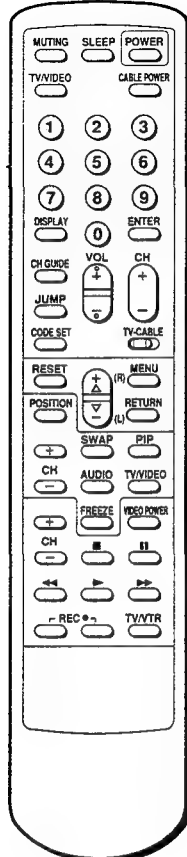
Press RETURN.

The VIDEO LABEL screen appears.

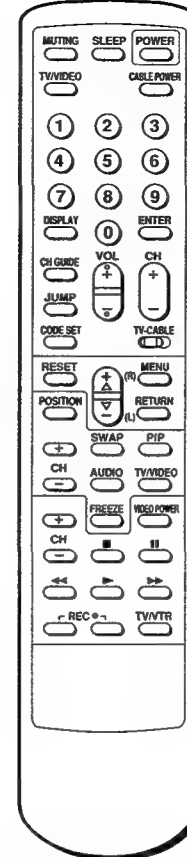
RETURN



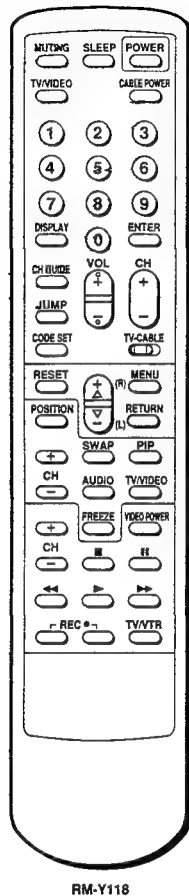
VIDEO LABEL
► VIDEO01: VIDEO1
VIDEO02: VIDEO2
VIDEO03: VIDEO3
► MENU
Use ◀ RETURN Exit ▶



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To return to the normal screen
Press MENU.

4 Press Δ or ∇ to select the input mode you want to label.

Press RETURN.

5 Press Δ or ∇ to select VHS.

Each time you press Δ +, the label changes:

VIDEO 1
VIDEO 1 → S VIDEO → BETA → 8 mm → VHS → LD

VIDEO 2
VIDEO 2 → BETA → 8 mm → VHS → LD

VIDEO 3
VIDEO 3 → BETA → 8 mm → VHS → LD
(∇ —: reverse order)

Press RETURN.

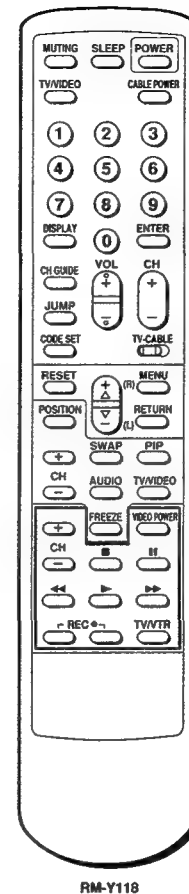
To label other input modes
Repeat steps 4–5.

VIDEO LABEL

►VIDEO1: VIDEO1
VIDEO2: VIDEO2
VIDEO3: VIDEO3
►MENU

Use Δ RETURN Exit MENU

1-13. USING THE PRE-PROGRAMMED REMOTE COMMANDER



You can operate your video equipment and cable converter box that has an infrared remote detector with this supplied pre-programmed Remote Commander.

Operating Sony or non-Sony Video Equipment—Pre-Programmed Function

With the supplied Remote Commander, you can operate a Sony video cassette recorder (Beta, 8 mm, VHS) or a multi disc player as well as most non-Sony video equipment connected to your TV by following the steps below.

- 1** While pressing CODE SET, press 0 - 9 to enter the manufacturer's code number (see chart on p. 56). For example, to operate a Sony 8 mm VCR, press 0, 2 and ENTER.



- 2** Use the video operating buttons on the Remote Commander to operate the video equipment.

Operating a VCR

To turn on or off
To change channels (when watching TV programs through the VCR's tuner)
To record
To play
To stop
To fast forward
To rewind the tape
To pause
To search the picture forward and backward

Press VIDEO POWER.
Press CH +/-
Press \bullet (2 buttons simultaneously).
Press \blacktriangleright .
Press \blacksquare .
Press $\blacktriangleright\blacktriangleright$.
Press $\blacktriangleleft\blacktriangleleft$.
Press II.
Press $\blacktriangleright\blacktriangleright$ or $\blacktriangleleft\blacktriangleleft$ during playback.

Operating a Video Disc Player

To play
To stop
To pause

Press \blacktriangleright .
Press \blacksquare .
Press II.
To resume normal playback, press again.
*This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the TV will go into the standby mode if II is pressed.
Keep pressing $\blacktriangleright\blacktriangleright$ or $\blacktriangleleft\blacktriangleleft$ during playback.
To resume normal playback, release the button.

To search the picture forward and backward

Manufactures and Code Numbers (VCR/video disc player)

Manufacturer	Code number
SONY	01, 02, 03, 04
CANON	05
EMERSON	22, 30, 33
FISHER	10, 11, 12, 15
FUNAI	29
GENERAL ELECTRIC	05, 08
GOLDSTAR	25
HITACHI	07, 08
JVC	16
MAGNAVOX	05, 06, 09
DAEWOO	18, 19, 26, 27
MITSUBISHI	29
MULTITECH	16, 23, 31
NEC	05, 06
PANASONIC	05, 06
PHILCO	05, 06
PHILIPS	05, 06, 09
QUASAR	05, 06
RCA	07, 08
SAMSUNG	24, 32
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SHINTOM	34
SYLVANIA	05, 06, 09
SYMPHONIC	29
TEKNIKA	28, 29
TOSHIBA	20, 21
TOTE VISION	25
ZENITH	17

The code numbers for Sony equipment are assigned as follows:

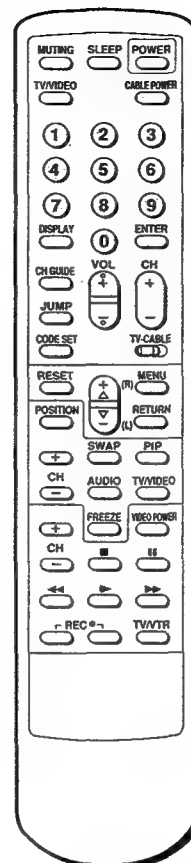
- 01 Beta, ED Beta VCR
- 02 8 mm VCR
- 03 VHS VCR
- 04 Video disc player

Notes

- If more than one code number is listed for manufacturers other than Sony, try entering them one by one, until you come to the correct code for your equipment.
- If the video equipment does not have a certain function, the corresponding button on this Remote Commander will not operate.
- In some rare cases, you may not be able to operate your non-Sony video equipment with the supplied Remote Commander. This is because your equipment may use a code that is not provided with this Remote Commander. In this case, please use the equipment's own remote control unit.

CAUTION

When you remove the batteries from the Remote Commander, all the settings will revert to the Sony Beta setting. Reset the codes by following the steps on p. 55.



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Manufactures and Code Numbers (cable box)

MANUFACTURER	CODE
JERROLD	60, 61, 62, 63, 64, 65
PIONEER	69, 70
SCIENTIFIC ATLANTA	66, 67
TOCOM	71, 72
ZENITH	68

Operating a Cable Converter Box

Follow these instructions to set the manufacturer's code which will enable you to operate a connected cable converter box with the pre-programmed Remote Commander.

EXAMPLE: Operate a connected Zenith cable converter box.

- Set the TV/CABLE selector to CABLE.



Notes

- If more than one code number is listed, try entering them one by one until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, your equipment may use a code that is not provided with this Remote Commander and you may not be able to operate your cable converter box with the supplied Remote Commander. In this case, use the equipment's own remote control unit.

- While pressing CODE SET, press 6 and 8 (Zenith's code number -see chart below) and ENTER.



A long beep sound's, indicating that the code has been set.

Note

If you press a wrong code or if the code has not been set, four short beeps sound. Repeat step 2 to set the code.

- Use CABLE POWER and the TV control buttons (0 - 9, ENTER, JUMP and CH +/-) to operate the cable converter box.



To operate the TV

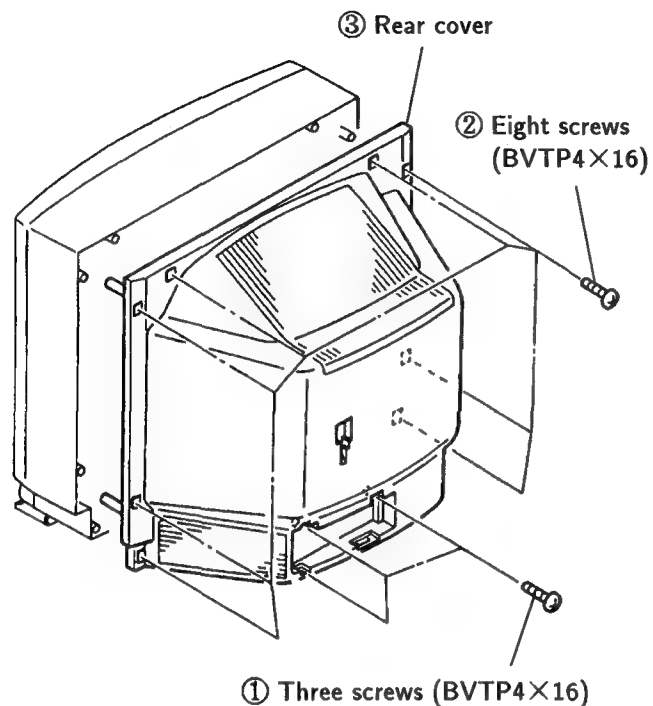
Set the TV/CABLE selector to TV, then use the TV control buttons to control the TV.

For more details on operating the cable box

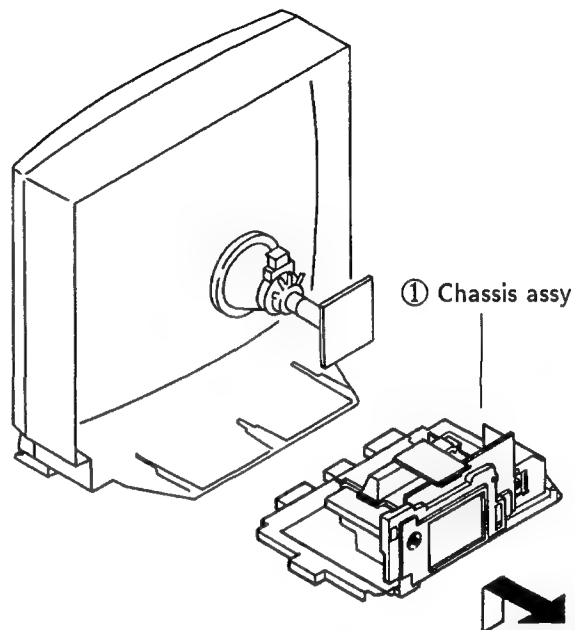
Refer to the operating instructions that come with the cable box.

SECTION 2 DISASSEMBLY

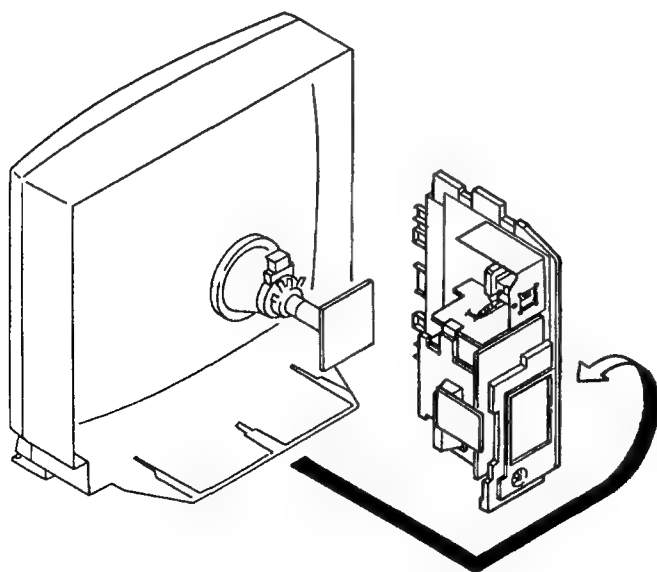
2-1. REAR COVER REMOVAL



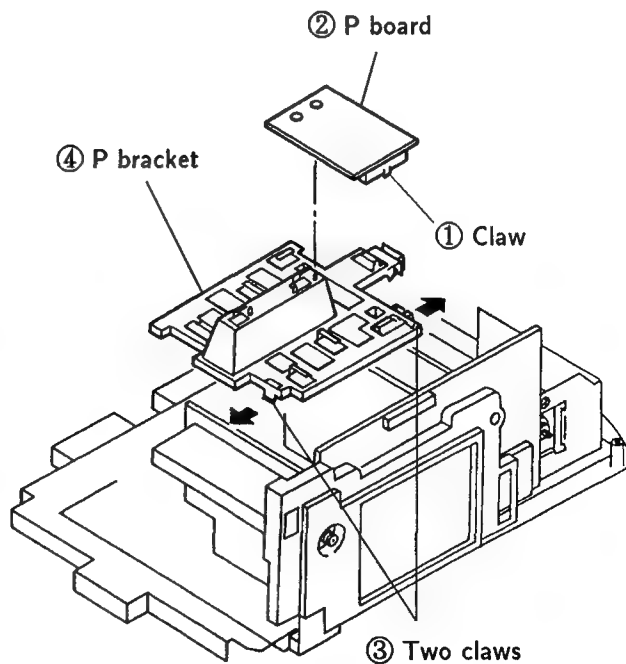
2-2. CHASSIS ASSY REMOVAL



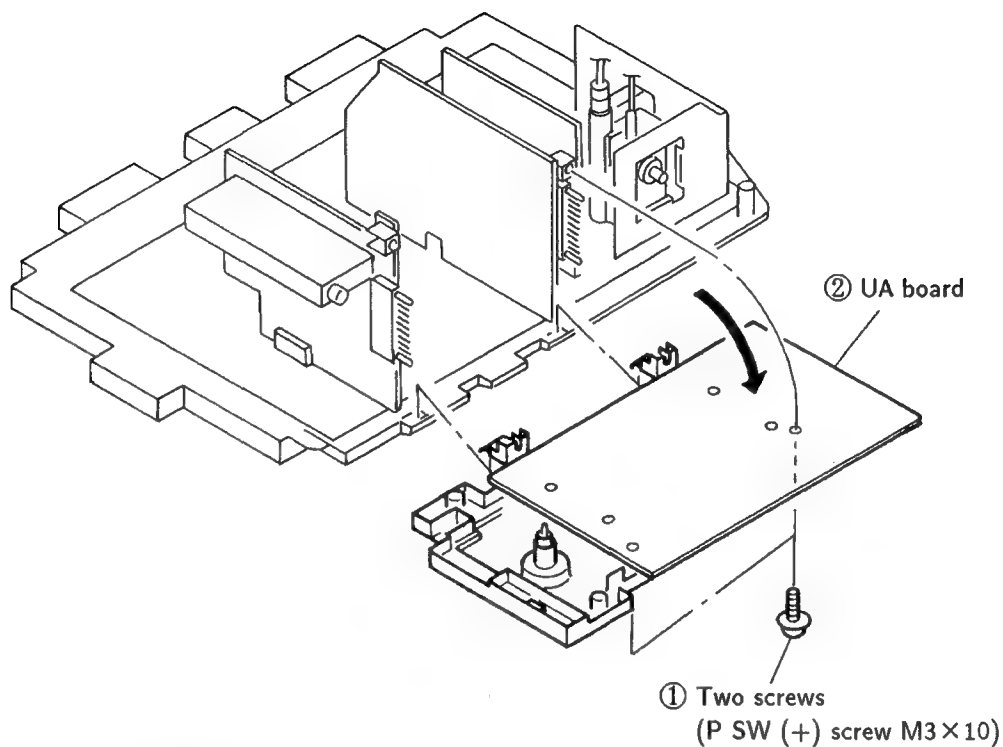
2-3. SERVICE POSITION



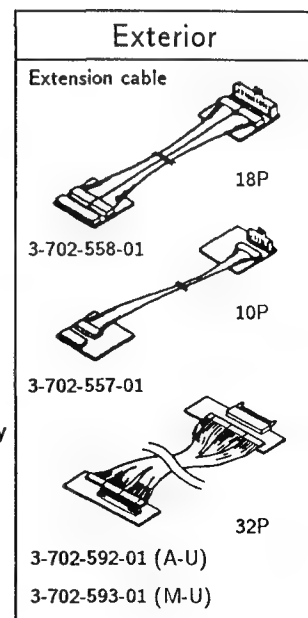
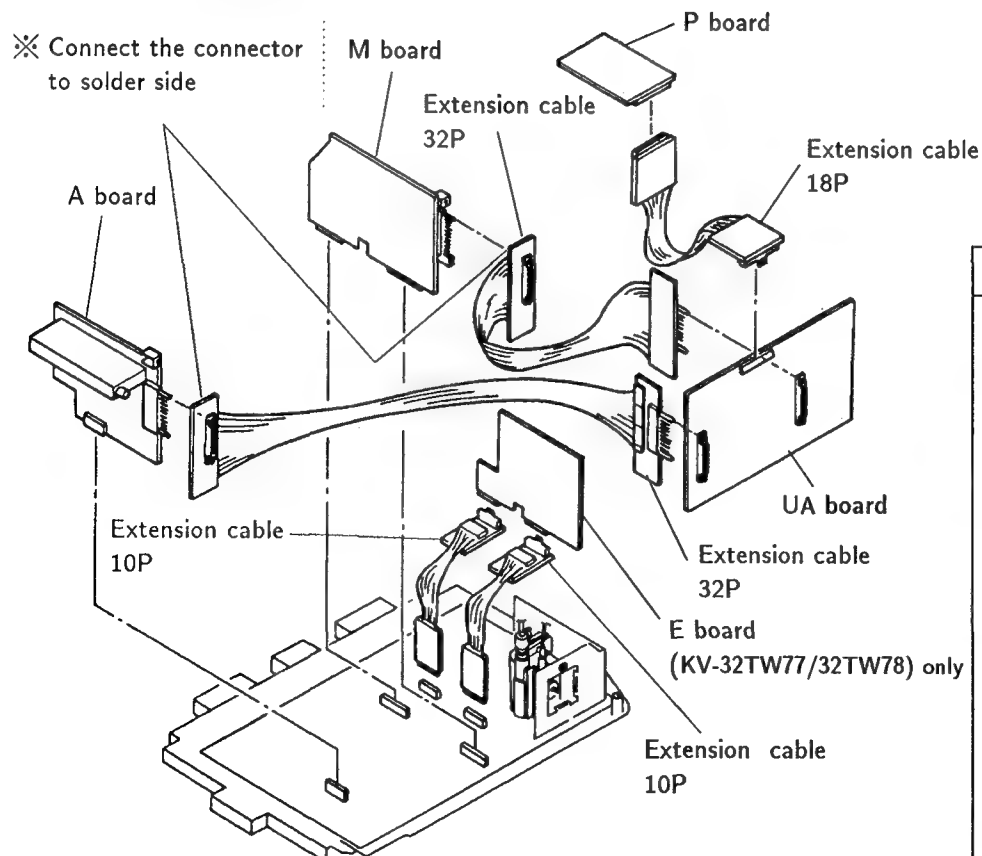
2-4. P BOARD AND P BRACKET REMOVAL (KV-32TS46 (UC/CND)/32TS36 (US/CND) /27TS36 (US/CND) only)



2-5. UA BOARD REMOVAL

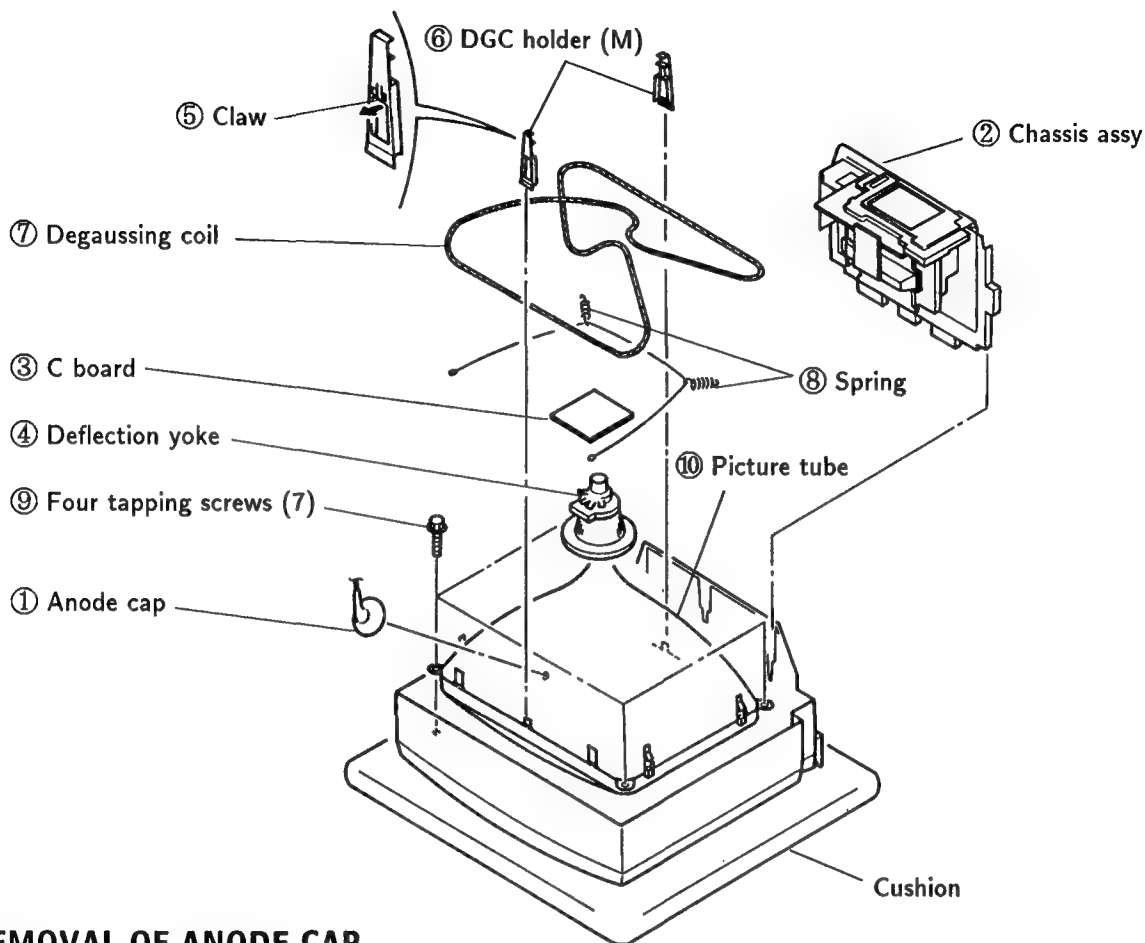


2-6. EXTENSION CABLE

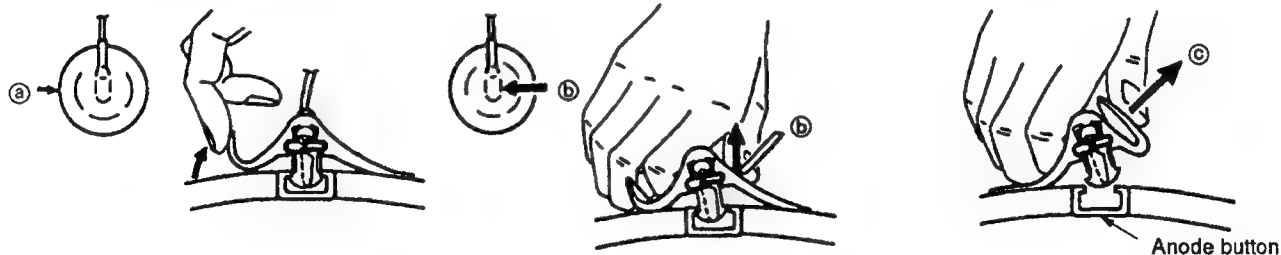


2-7. PICTURE TUBE REMOVAL (1)

(KV-27TS36 (US/CND)/27TS32/27TS29 (US/CND) only)

**• REMOVAL OF ANODE-CAP**

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

• REMOVING PROCEDURES

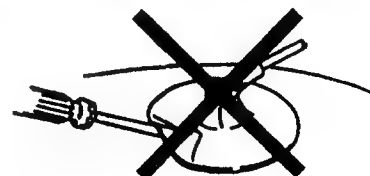
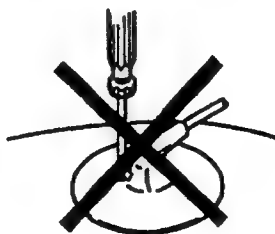
① Turn up one side of the rubber cap in the direction indicated by the arrow ①.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

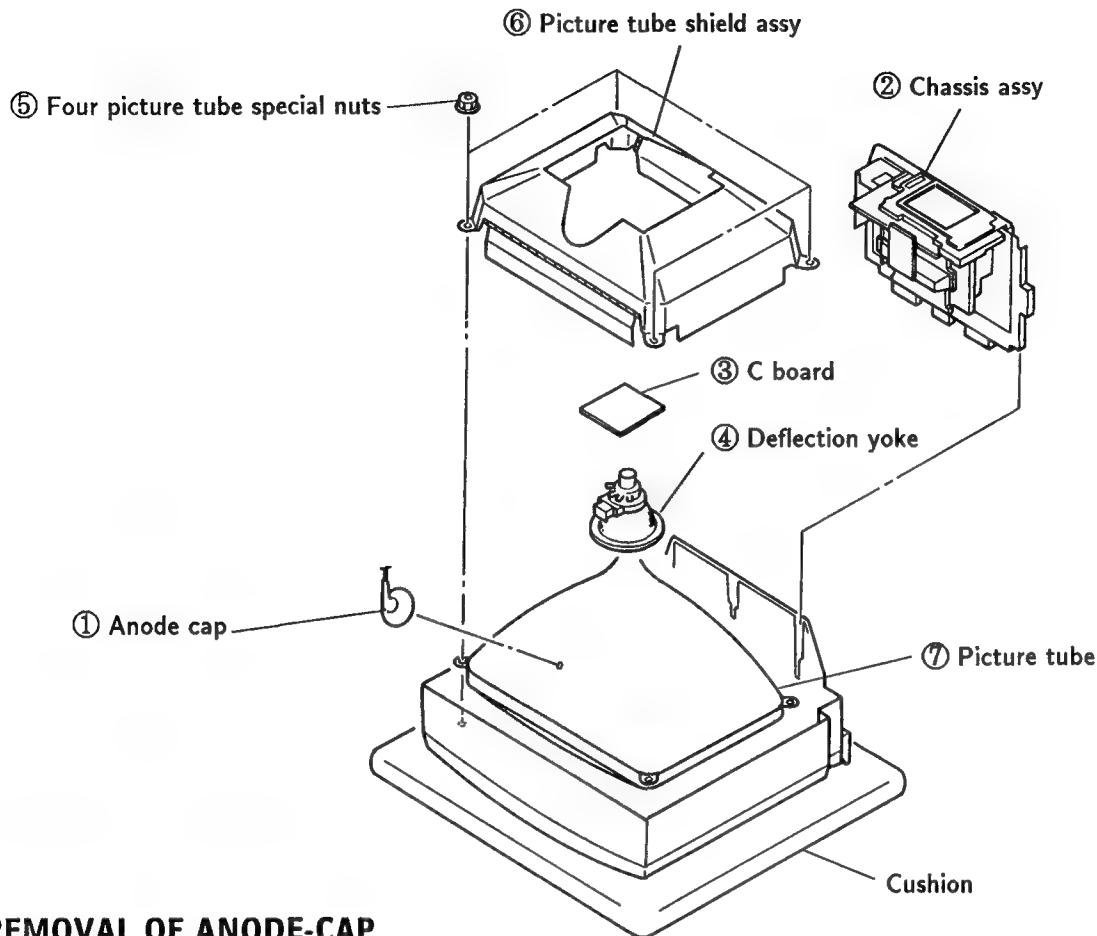
• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



2-7. PICTURE TUBE REMOVAL (2)

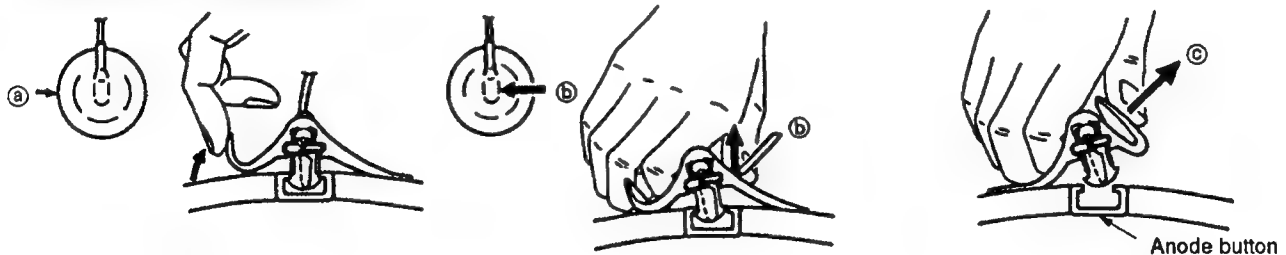
(KV-32TS46 (US/CND)/32TS36 (US/CND) only)



• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

• REMOVING PROCEDURES



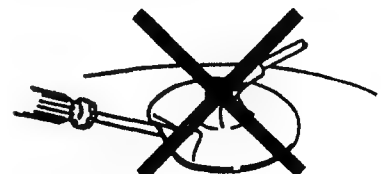
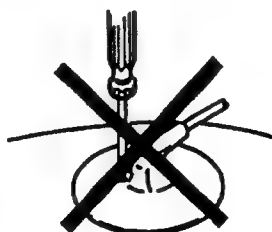
① Turn up one side of the rubber cap in the direction indicated by the arrow ②.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ②.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ③.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



2-8. REPAIR OF CHIP COMPONENT CIRCUIT BOARD

2-8-1. POINTS OF COMPONENT REMOVAL

Handling of blower type soldering iron

If hot blast is too strong or applied from a slanting direction, small components and solder near the component being removed can be blown off. Do not use blower type without temperature control.

2-8-2. NOTES ON SOLDERING FOR CHIP COMPONENTS

- 1) During soldering a chip component, if a soldering iron is applied for a long time, the heat may damage the component or cause pattern peeling.
- 2) Do not reuse a removed component. The characteristics of such a component may deteriorate.
- 3) Use wire solder containing silver (ϕ 0.3 or ϕ 0.6). (The pin electrodes of the laminated chip capacitor are silver + palladium, so if wire solder which does not contain silver is used, the silver of the pin electrode will be sucked into the solder.)

2-8-3. REMOVAL AND MOUNTING OF COMPONENTS

Chip resistor and chip capacitor

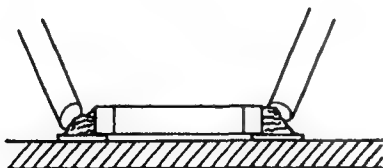
REMOVAL

- Using two soldering irons

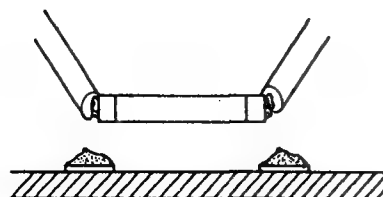
1) Mounted state



2) Melt the solder.

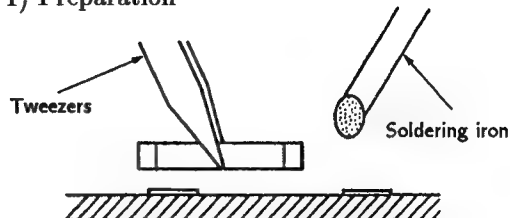


3) Remove the component.



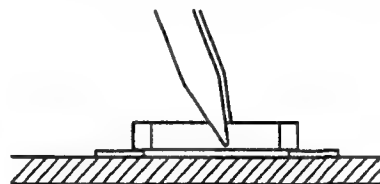
SOLDERING

1) Preparation

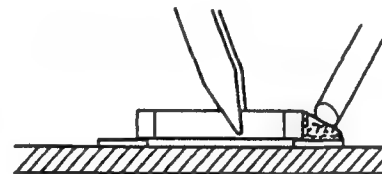


2) Location

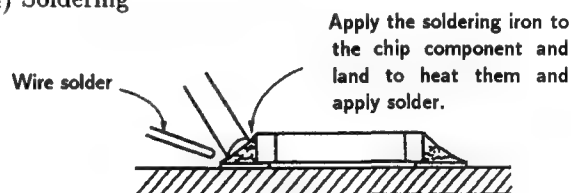
Be careful not to misposition.



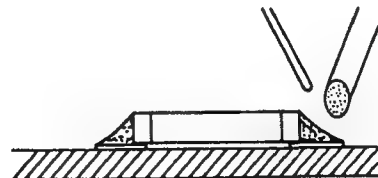
3) Tack soldering and flux application



4) Soldering



5) Soldering (Fix the fillet.)



6) Visual inspection

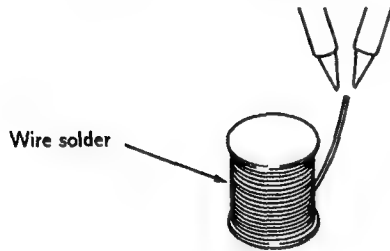
Check for the following defects :

- No-soldered part
- Bridge (to other components or lands)
- Mispositioning
- Other defects

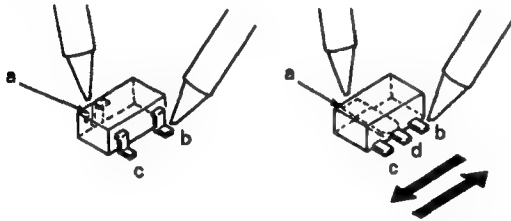
2-8-4. MINI-TRANSISTOR

REMOVAL

- Using two soldering irons
- 1) Put a little solder on the tip of two soldering irons.

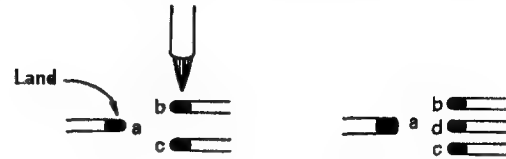


- 2) Apply the tip of one soldering iron to the point "a" and the other to the points "b" → "c" (or "b" → "d" → "c") and move the component in the directions indicated by arrows in the figure to remove it.

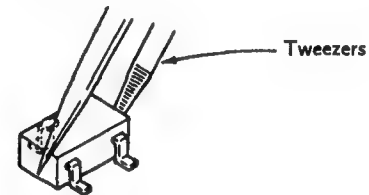


MOUNTING

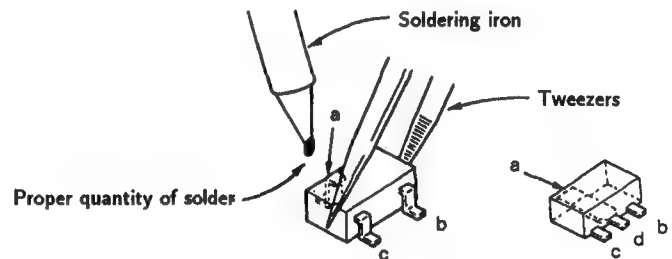
- 1) Apply a little flux to the land with a brush.



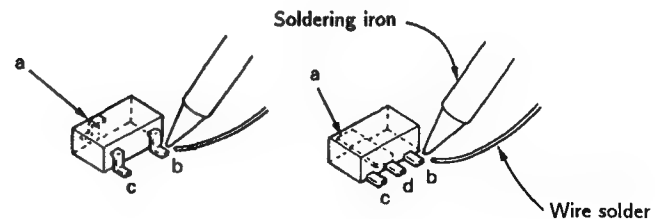
- 2) Place the component in position using tweezers.



- 3) Put a little solder on the tip of the soldering iron and solder the point "a" to fix the component.

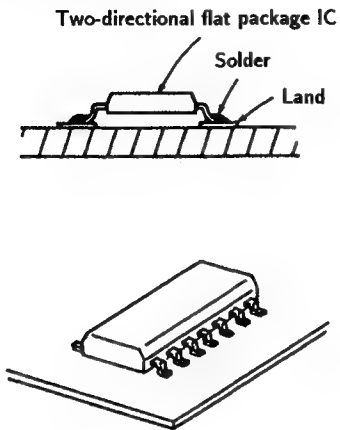


- 4) Bring the tip of the soldering iron and the wire solder close to the point to be soldered. Solder the points "b" → "c" (or "b" → "d" → "c") in order.

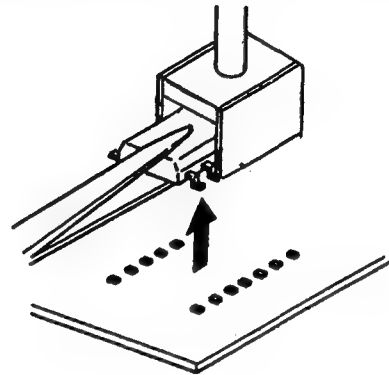


2-8-5. TWO-DIRECTIONAL FLAT PACKAGE IC

MOUNT CONDITION

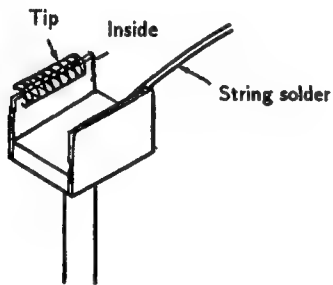


- 3) When the solder melts, lift the IC with a pair of tweezers and remove.

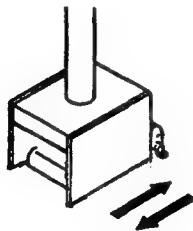


REMOVAL

- 1) Apply some solder on the inside and the tip of the iron tip jig.

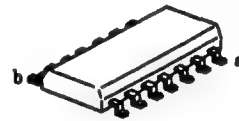


- 2) Place the iron tip jig over the IC, and move the jig to and fro as shown in the figure.

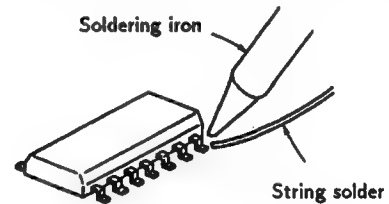


INSTALLATION

- 1) Place the two-directional flat package IC at the appointed position, solder pins a and b on the diagonal, and fasten it.

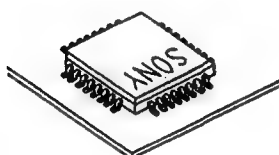
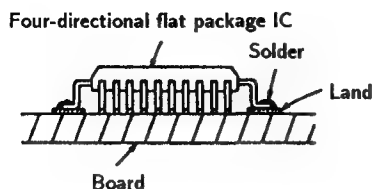


- 2) Solder the remaining pins with the soldering iron.



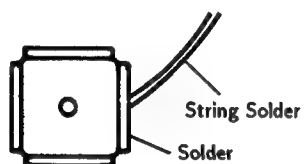
2-8-6. FOUR-DIRECTIONAL FLAT PACKAGE IC

MOUNT CONDITION

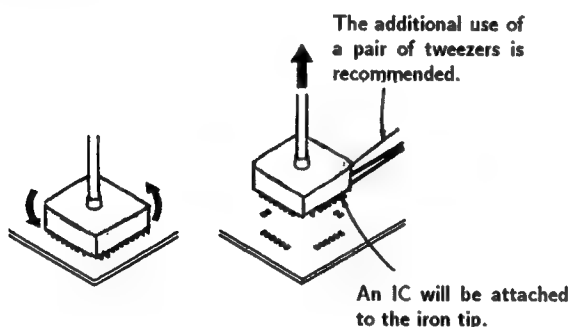


REMOVAL

- 1) Apply solder on the tip of the iron tip jig.



- 2) Place the iron tip jig over the IC, wait about two to three seconds, rotate the iron slightly and lift it up.



Note: For flat ICs of above 52P, the IC may not be completely attracted when the iron tip jig is lifted up. In these cases, use a pair of tweezers to remove.

INSTALLATION

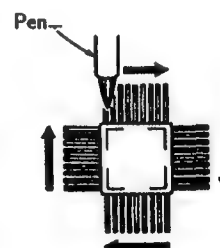
- 1) Place the four-directional flat package IC at the appointed position.



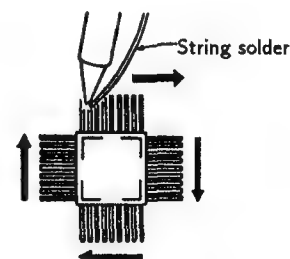
- 2) Apply a slight amount of solder on the iron tip, and solder the three sections in the order of a → b → c, and fix.



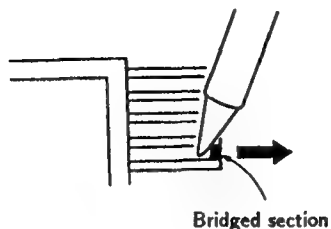
- 3) Apply a slight amount of flux with a pen on all four directions.



- 4) Apply solder on the iron tip and the string solder, and slide and solder in the directions of the arrows.



Note: 1) After soldering, if there are bridged sections, correct by sliding the soldering iron in the direction of the arrow.



If the bridges cannot be corrected using the above method, apply some flux with a pen and try again.

2) Soldering can be carried out more easily by sliding the iron tip near the tip of the IC leg. (Fig. A)

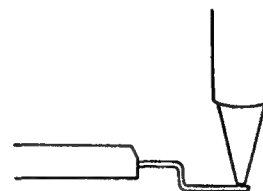


Fig. A

Be careful not to slide the bent sections of the leg as shown in Fig. B as soldering bridges will be formed.

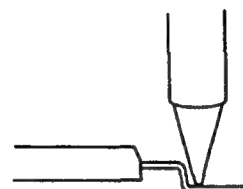
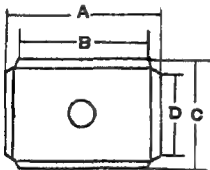
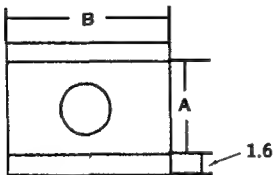
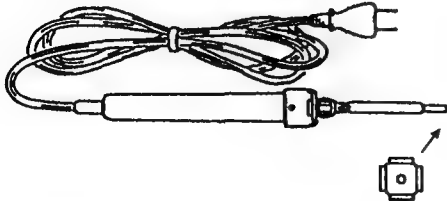
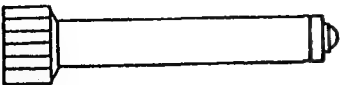


Fig. B

Exterior	Description	Part No.	Measure (mm)			
			A	B	C	D
	jig for removing 4-sided flat package IC	3-702-554-01	12.5	9.5	12.5	9.5
		" 11	15.5	12.5	15.5	12.5
		" 21	16.3	13.3	16.3	13.3
		" 31	17.0	14.0	17.0	14.0
		" 41	23.0	20.0	17.0	14.0
		" 51	20.0	17.0	20.0	17.0
	jig for removing 2-sided flat package IC	3-702-555-01	6.0	5.0		
		" 11	6.0	10.0		
		" 21	7.0	12.5		
		" 31	9.0	15.2		
		" 41	9.0	18.0		
	soldering iron	3-702-552-01	55W 60g length 210mm			
	soldering holder	3-702-553-01				

SECTION 3

SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted :

PICTURE control RESET
BRIGHTNESS control center

Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
Contrast } normal
Bightness }
2. Set the pattern generator raster signal to green.
3. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side.
(See Figures 3-1 through 3-3.)
4. Move the deflection yoke forward and adjust so that entire screen is green. (See Figure 3-1.)
5. Switch the raster signal to blue, then to red and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it.
(See Figure 3-4.)

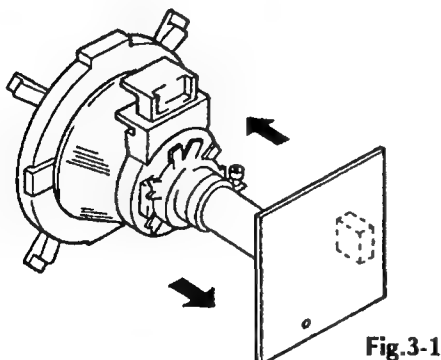


Fig.3-1

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

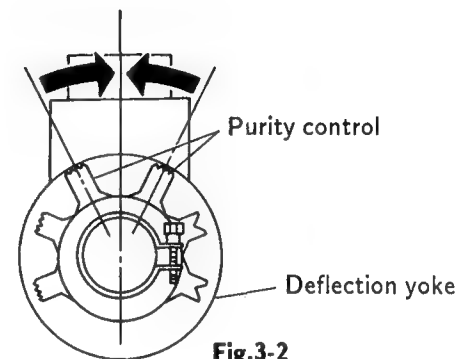


Fig.3-2

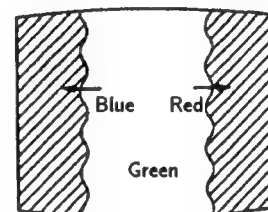


Fig.3-3

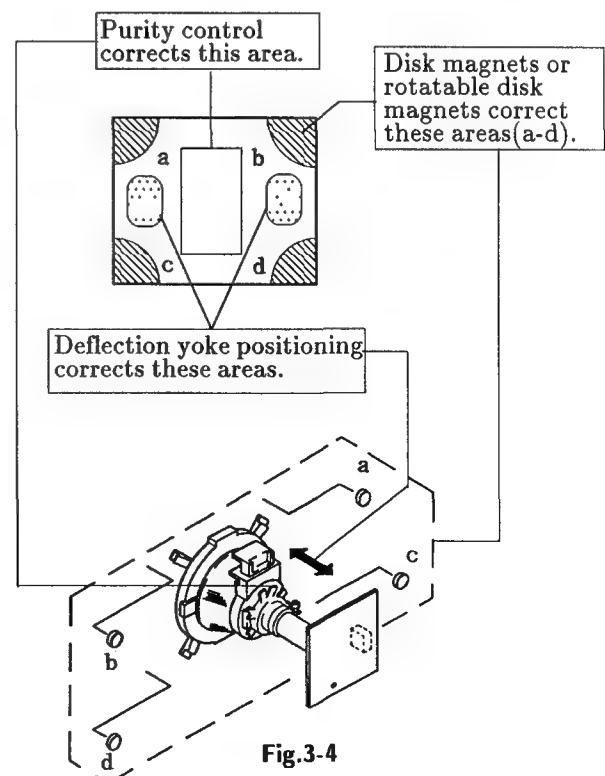


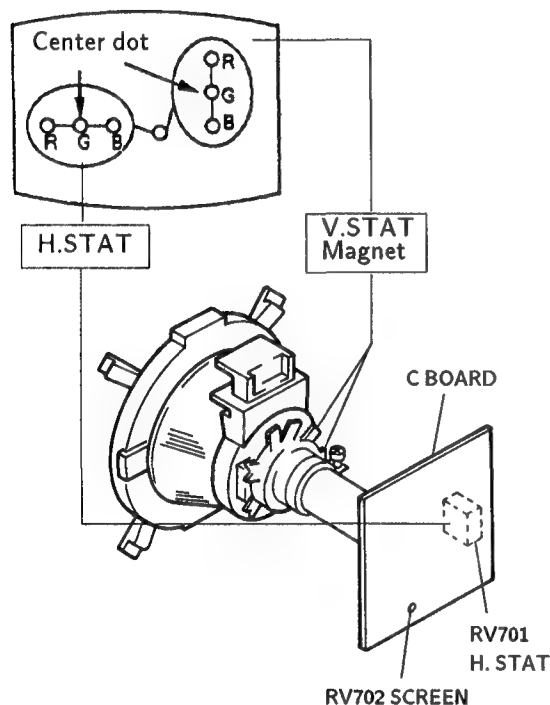
Fig.3-4

3-2. CONVERGENCE

Preparation :

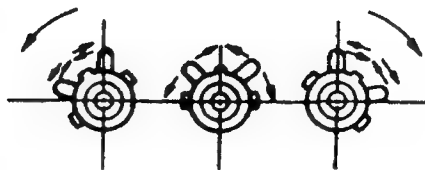
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and Vertical Static Convergence

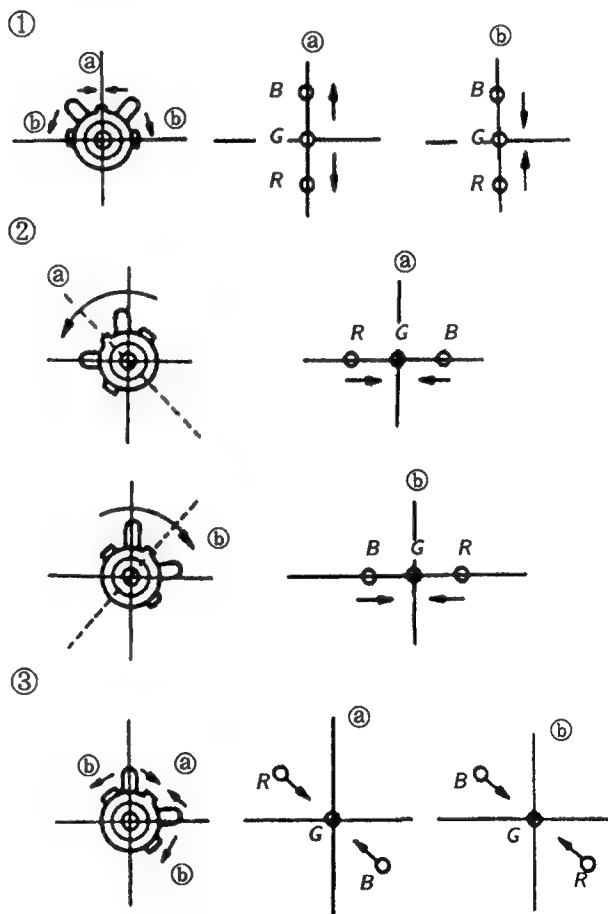


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.
(In this case, the H.STAT variable resistor and the V. STAT magnet influence each other)

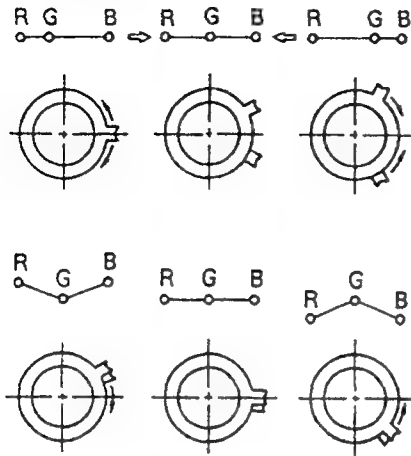
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the red, green, and blue points move as shown below.



• Operation of BMC (Hexapole) Magnet

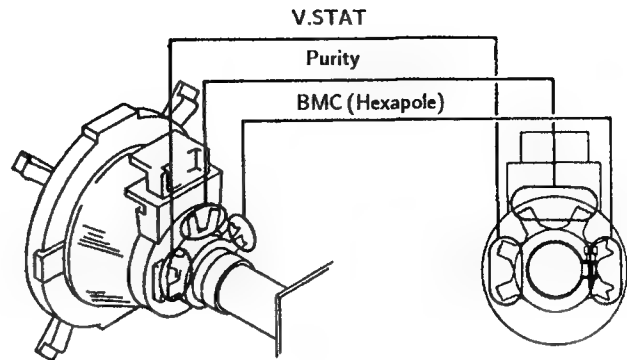


- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking. Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

(2) Dynamic Convergence Adjustment

Preparations :

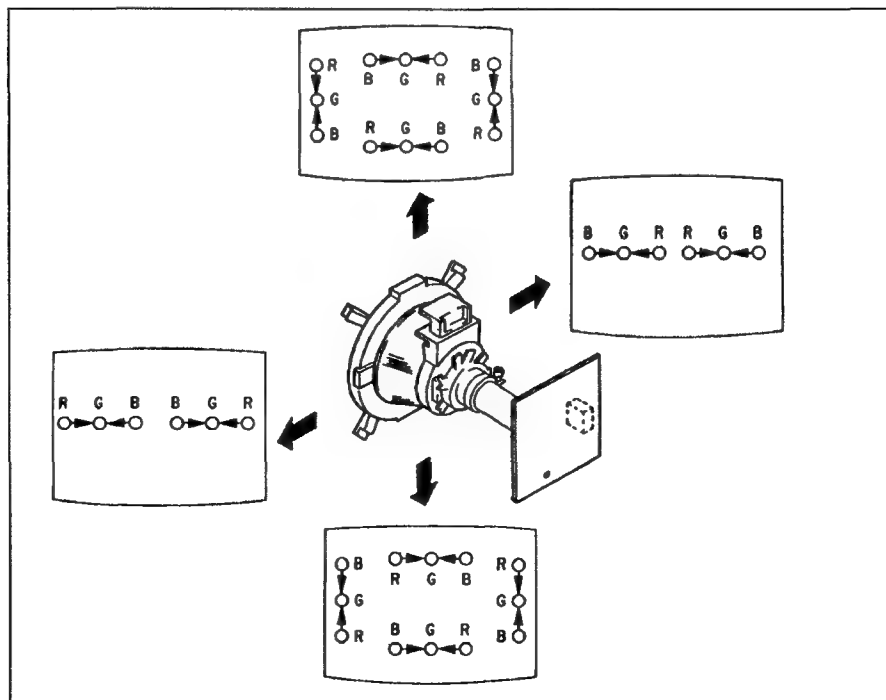
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
1. Slightly loosen the deflection yoke screws.
 2. Remove the deflection yoke spacer.



• Y separation axis correction magnet adjustment

1. Receive the cross-hatch signal, and adjust [PIX] to "MIN" and [BRT] to "standard".
2. Adjust the deflection yoke to the upright condition when it hits the CRT.
3. Adjust so that the Y separation axis correction magnet on the neck assembly is symmetrical at the top and bottom (open state).
4. Return the deflection yoke to its original position.

3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Install the deflection yoke spacer.



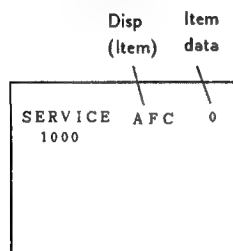
(3) Dynamic Convergence Circuit Adjustment

(32 inch only)

SERVICE MODE PROCEDURE

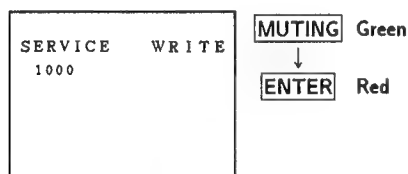
- Standby mode. (Power off)
- DISPLAY** → **5** → **VOL (+)** → **POWER** on the Remote Commander. (Press each button within a second.)

SERVICE ADJUSTMENT MODE IN

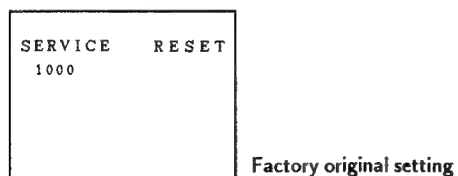


- The CRT displays the item Being adjusted.
- Press **1** or **4** on the Remote Commander to select the item.
- Press **3** or **6** on the Remote Commander to change the data.
- Press **MUTING** then **ENTER** to write into memory.

SERVICE ADJUSTMENT MODE MEMORY



- Press **8** then **ENTER** on the Remote Commander to initialize.

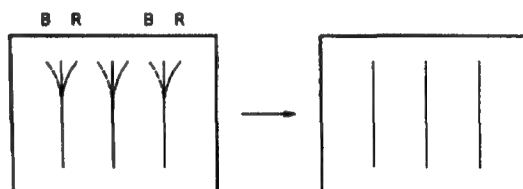


- Turn set off and on to exit.

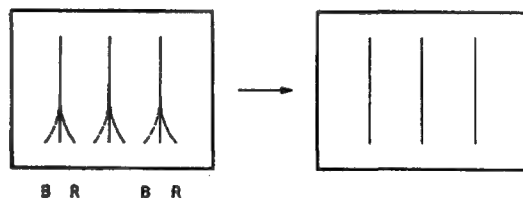
- Set to Service Mode.
- Input a cross-hatch signal.
- Press **1** and **4** select an item of adjustments.
- Adjust **3** and **6** to the best picture.

No.	Disp.	Item	Ave.Data
39	UYBO	Upper Y-Bow	31
40	LYBO	Lower Y-Bow	25
41	HAMP	H. Amp	33
42	HTIL	H. Tilt	33
43	UCBO	Upper C-Bow	38
44	UTIL	Upper Tilt	40
45	LCBO	Lower C-Bow	41
46	LTIL	Lower Tilt	46
47	DCSH	DC Shift	37

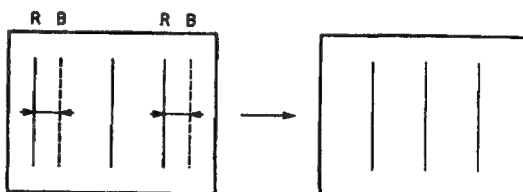
U. YBOW

Select UYBO with **1** and **4**

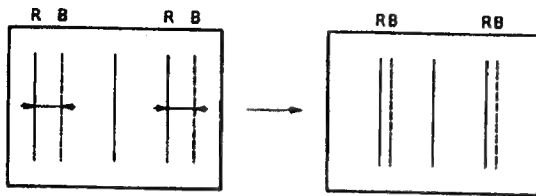
L. YBOW

Select LYBO with **1** and **4**

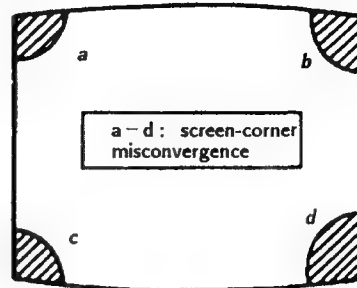
H. AMP

Select HAMP with **1** and **4**

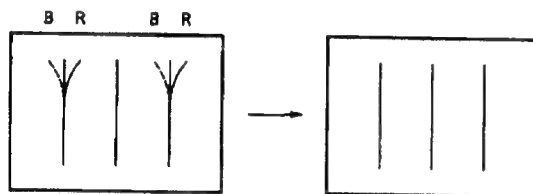
H. TILT

Select HTILT with **1** and **4**

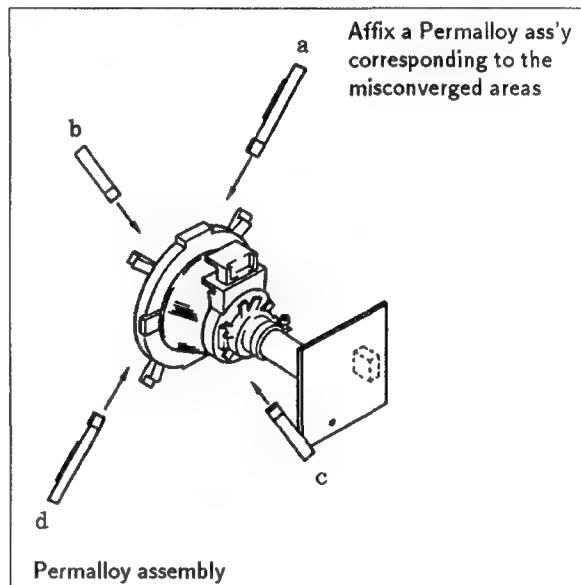
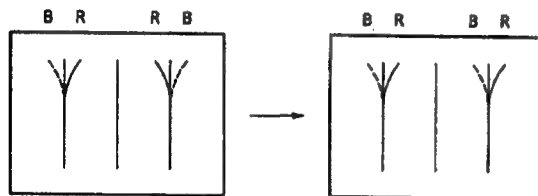
(4) Screen-corner Convergence



U. CBOW

Select UCBO with **1** and **4**

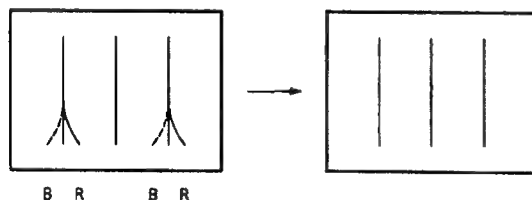
U. TILT

Select UTIL with **1** and **4**

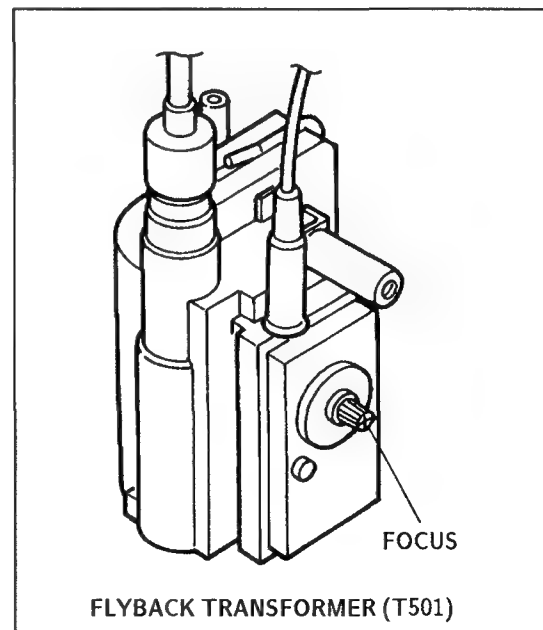
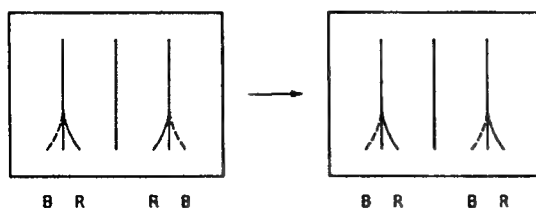
3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for a best focus.

L. CBOW

Select LCBO with **1** and **4**

L. TILT

Select L. TIL with **1** and **4**

3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G 2 (SCREEN) ADJUSTMENT(RV 702)

1. Set the PICTURE and BRIGHTNESS to normal.
2. Confirm G 1 voltage is within 30.0 ± 5 V.
3. Apply DC voltage of 180 V to the cathodes of R,G and B from DC stabilized power source.
4. While watching the picture, adjust the G2 control (RV 702) to the just the retrace line disappears.

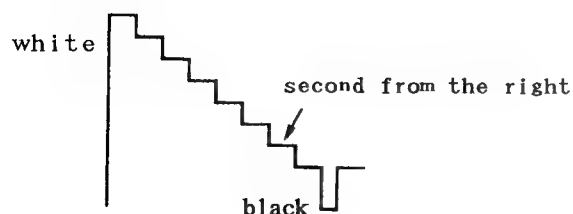
2. WHITE BALANCE ADJUSTMENTS

No.	Disp.	Item	Ave. Data
14	GAMP	Green Amp	20
15	BAMP	Blue Amp	17
16	GCUT	Green Cut-off	7
17	BCUT	Blue Cut-off	8
22	SBRT	Sub Bright	35

1. Input an entire white signal.
2. Set to service adjustment mode.
3. Set the PICTURE and BRIGHT to minimum.
4. Adjust with SBRT if necessary.
5. Select G CUT and B CUT with **[1]** and **[4]**.
6. Adjust with **[3]** and **[6]** for the best white balance.
7. Set the PICTURE and BRIGHT to maximum.
8. Select GAMP and BAMP with **[1]** and **[4]**.
9. Adjust with **[3]** and **[6]** for the best white balance.
10. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

3. SUB BRIGHT ADJUSTMENT

1. Set to service mode.
2. Input a staircase signal of black and white from the pattern generator.
3. BRIGHTNESS ... RESET
PICTURE minimum
4. Select SBRT with **[1]** and **[4]** , and adjust SUB BRIGHT level with **[3]** and **[6]** so that the stripe second from the right is dimly lit.



SECTION 4

SAFETY RELATED ADJUSTMENTS

☒ R511 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ☒ on the schematic diagram).
PM501, R338, R511, R632, R645, R650

①

1. Preparation before confirmation

- 1) Remove R635 on the D board and connect a variable resistor (RV1: about 22k Ω) between pin ① of IC601 and B+ line.
- 2) Supply 130 \pm 2.0V AC to with variable auto-transformer.

2. Hold-down operation confirmation

- 1) Turn the POWER switch ON, and receive entirely white signals and adjust ABL current to 1760 \pm 50 μ A with PICTURE and BRIGHT etc controls.
- 2) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 142.5V DC (27 inch) 140.0V DC (32 inch) whereby the raster disappears during operation of hold-down circuit.

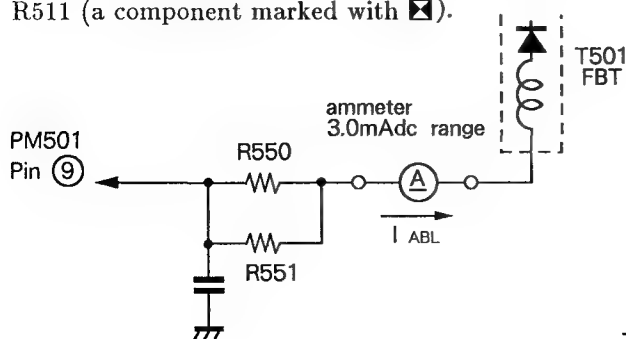
NOTE: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

- 3) Turn the POWER switch ON, and receive dot signals and adjust ABL current to 160 \pm 50 μ A with PICTURE and BRIGHT etc controls.
- 4) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 145.0V DC (27 inch), 143.5V DC (32 inch) whereby the raster disappears during operation of hold-down circuit.

NOTE: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

3. Hold-down readjustment

When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R511 (a component marked with ☒).



☒ R524 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ☒ on the schematic diagram).

IC601, PM501, D504, C598, R338, R509, R524, R632, R635, R645, T501

②

1. Preparation before confirmation

- 1) Turn the POWER switch ON, and receive entirely white signals and set the PICTURE and BRIGHT controls to maximum.
- 2) Confirm that voltage of the check terminal of TP-85 (D BOARD) is more than 114.0V DC (27 inch) 122.3V DC (32inch) when the set is operating normally with 120.0 \pm 2.0V AC supply.

2. Hold-down operation confirmation

- 1) Turn the POWER switch ON, and receive entirely white signals and adjust ABL current to 1760 \pm 50 μ A with PICTURE and BRIGHT etc controls .
- 2) Apply DC voltage of over 130.0V DC gradually to the check terminal of TP-85 (D BOARD) via 1T40 from the DC stabilized power source. Confirm that the minimum voltage is less than 137.5V DC (27inch) 143.5V DC (32inch) whereby the raster disappears during operation of hold-down circuit.

NOTE: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

- 3) Turn the POWER switch ON, and receive dot signals and adjust ABL current to 160 \pm 50 μ A with PICTURE and BRIGHT etc controls .
- 4) Apply DC voltage of over 130.0V gradually to the check terminal of TP-85 (D BOARD) via 1 T40 from the DC stabilized power source. Confirm that the minimum voltage is less than 138.0V DC (27inch) 144.1V DC (32inch) whereby the raster disappears during operation of hold-down circuit.

NOTE: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

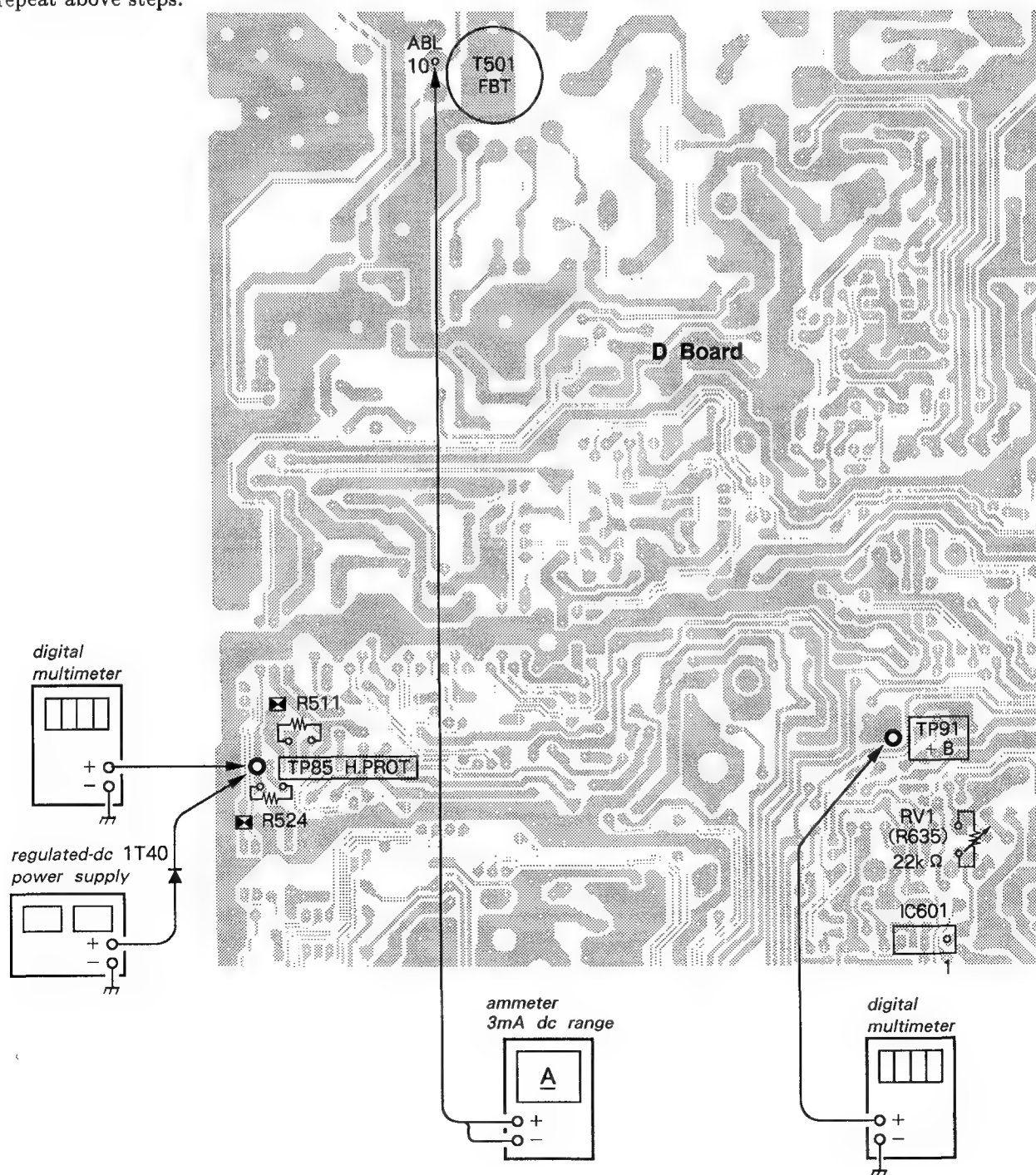
3. Hold-down readjustment

When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R524 (a component marked with ☒).

B+ VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC601 and R635.

- 1) Supply $130 \pm 2\%$ V AC to with variable autotransformer.
- 2) Receive entirely monoscope signal.
- 3) Set the PICTURE control and the BRIGHT controls in to initial reset.
- 4) Confirm the voltage of TP91 is less than 137.0V DC.
- 5) If step 4) is not satisfied, replace IC601 and R635 repeat above steps.



SECTION 5 CIRCUIT ADJUSTMENTS

KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

5-1. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

Use of Remote Commander can be performed circuit adjustments about this model.

NOTE : Test Equipment Required.

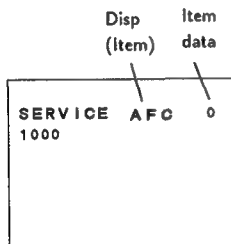
1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC

1. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

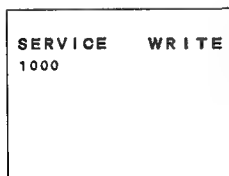
1. Standby mode.(Power off)
2. **DISPLAY** → **5** → **VOL (+)** → **POWER** on the Remote Commander. (Press each button within a second.)

SERVICE ADJUSTMENT MODE IN



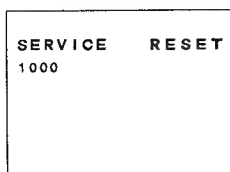
3. The CRT displays the item Being adjusted.
4. Press **1** or **4** on the Remote Commander to select the item.
5. Press **3** or **6** on the Remote Commander to change the data.
6. Press **MUTING** then **ENTER** to write into memory.

SERVICE ADJUSTMENT MODE MEMORY



MUTING Green
↓
ENTER Red

7. Press **8** then **ENTER** on the Remote Commander to initialize.



Carry out step 7) when adjusting IDs 0 to 4 and when replacing and adjusting IC102.

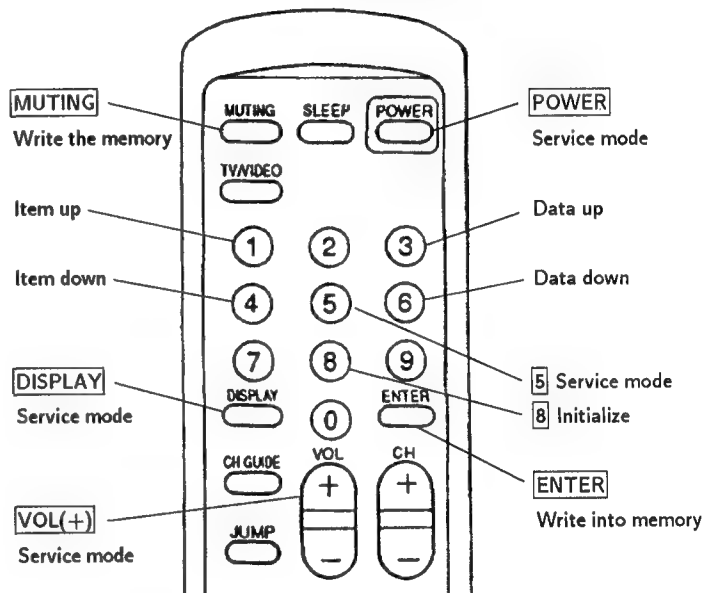
Factory original setting

8. Turn set off and on to exit.

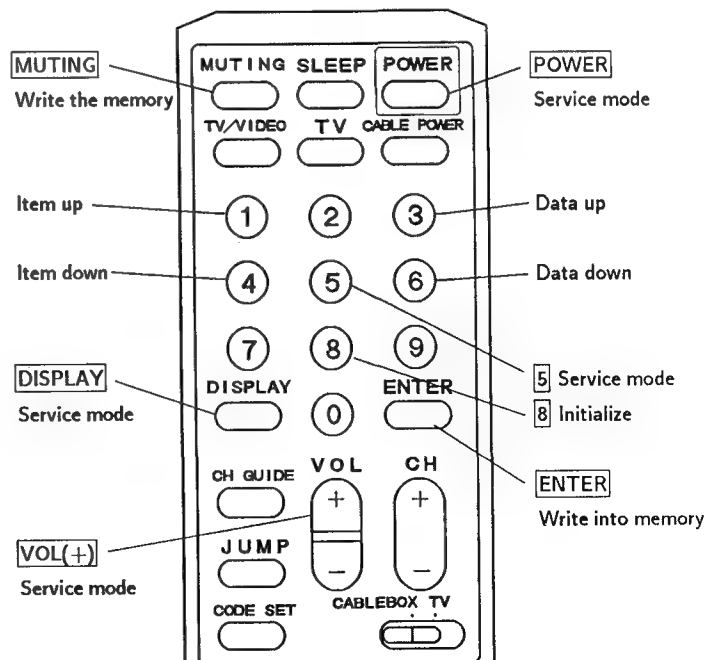
2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2. Turn the power switch ON and set to Service Mode.
3. Call the adjusted items again, confirm they were adjusted.

3. ADJUST BUTTONS AND INDICATOR



RM-Y116



RM-Y117/RM-Y118

4. AN ITEM OF ADJUSTMENTS

No.	Disp.	Item	Data range	Ave. data (27 inch)	Ave. data (32 inch)
1	AFC	AFC Loop Gain	0~3	* 0	* 0
2	HFRE	H. Frequency	0~127	70	70
3	VFRE	V. Frequency	0~31	16	16
4	VPOS	V. Center	0~31	17	17
5	VSIZ	V. Size	0~63	28	12
6	VLIN	V. Linearity	0~15	8	7
7	VSCO	V. Correction	0~15	6	6
8	HPOS	H. Center	0~15	6	5
9	HSIZ	H. Size	0~31	31	27
10	PAMP	Pin Amp	0~31	24	31
11	CPIN	Corner Pin	0~7	3	0
12	PPHA	Pin Phase	0~15	5	4
13	VCOM	V. Compensation	0~7	* 2	* 2
14	GAMP	Green Amp	0~31	20	20
15	BAMP	Blue Amp	0~31	17	17
16	GCUT	Green Cut Off	0~15	7	7
17	BCUT	Blue Cut Off	0~15	8	8
18	CROM	Chroma Trap	0~63	* 28	* 28
19	SPIX	Sub Contrast	0~63	20	20
20	SHUE	Sub Hue	0~63	33	33
21	SCOL	Sub Color	0~63	32	32
22	SBRT	Sub Bright	0~63	35	35
23	RGBP	RGB Picture	0~63	* 10	* 10
24	SHAP	Sharpness	0~15	* 7	* 7
25	VSMO	V Pull in Range	0, 1	* 0	* 0
26	REF	Reference line	0~3	* 2	* 2
27	ROFF	Red Out	0, 1	1	1
28	GOFF	Green Out	0, 1	1	1
29	BOFF	Blue Out	0, 1	1	1
30	ABLM	ABL Mode	0, 1	* 0	* 0
31	NOTC	Notch On/Off	0, 1	* 1	* 1
32	DRGB	OSD intensity	0, 1	* 0	* 0
33	VANG	V. Angle	0~63	0	0
34	DISP	Display Position	0~63	40	40
35	SVOL	Sub Volume	0~15	* 0	* 0
36	SBAL	Sub Balance	0~15	7	7
37	BASS	Sub Bass	0~15	* 8	* 8
38	TRE	Sub Treble	0~15	* 7	* 7
39	UYBO	Upper Y. Bow	0~63	—	31
40	LYBO	Lower Y. Bow	0~63	—	25
41	HAMP	H. Amp	0~63	—	33
42	HTIL	H. Tilt	0~63	—	33
43	UCBO	Upper C. Bow	0~63	—	38
44	UTIL	Upper Tilt	0~63	—	40
45	LCBO	Lower C. Bow	0~63	—	41
46	LTIL	Lower Tilt	0~63	—	46
47	DCSH	DC. Shift	0~63	—	37
48	PHPO	PinP H Position	0~127	76	76
49	PHUE	PinP Hue	0~31	* 0	* 0
50	ID-0	Model ID	0~127	by Model	by Model
51	ID-1	Model ID	0~127	by Model	by Model
52	ID-2	Model ID	0~127	by Model	by Model
	ID-2	Model ID	0~127	by Model	by Model
	ID-2	Model ID	0~127	by Model	by Model
53	ID-3	Model ID	0~127	by Model	by Model
54	ID-4	Model ID	0~127	by Model	by Model

Note : No. from 1 to 54 is to show adjustment order

SERVICE	ID 0	64
1000	1000	000

Please adjust the function values as shown below when IC 102 on M board was replaced.

KV-27TS29 (US)

No.	Disp.	Disp.	Data
50	ID-0	1 0 0 0 0 0 0	64
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	1 0 0 0 0 0 0	64
53	ID-3	0 0 0 0 0 0 0	0
54	ID-4	0 0 1 0 0 0 0	16

KV-27TS29 (CND)

No.	Disp.	Disp.	Data
50	ID-0	1 0 0 0 0 0 0	64
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	0 0 0 0 0 0 0	0
53	ID-3	0 0 0 0 0 0 0	0
54	ID-4	0 0 1 0 0 0 0	16

KV-27TS32 (US)

No.	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	1 1 0 1 0 0 0	104
53	ID-3	0 0 0 0 0 0 0	0
54	ID-4	0 0 1 0 0 0 0	16

* : Set-up value

KV-27TS36/32TS36 (US)

No	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	1 0 0 1 0 0 0	72
53	ID-3	1 0 0 0 0 0 0	64
54	ID-4	0 0 1 0 0 0 0	16

KV-27TS36/32TS36 (CND)

No.	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	0 0 0 1 0 0 0	8
53	ID-3	1 0 0 0 0 0 0	64
54	ID-4	0 0 1 0 0 0 0	16

KV-32TS46 (US)

No.	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	1 0 0 1 0 0 0	72
53	ID-3	0 1 0 0 1 0 0	36
54	ID-4	0 0 1 0 0 0 0	16

KV-32TS46 (CND)

No.	Disp.	Disp.	Data
50	ID-0	1 1 1 1 0 0 0	120
51	ID-1	1 1 1 1 1 1 1	127
52	ID-2	0 0 0 1 0 0 0	8
53	ID-3	0 1 0 0 1 0 0	36
54	ID-4	0 0 1 0 0 0 0	16

5-2. M BOARD ADJUSTMENTS

H.FREQUENCY ADJUSTMENT (HFRE)

1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Connect a frequency counter to CN131 Pin⑬ (H. DRIVE) connector and ground.
4. Call the item of AFC, set to 3 level (free run).
5. Select HFRE with **[1]** and **[4]**.
6. Adjust with **[3]** and **[6]** for the $15734 \pm 60\text{Hz}$.
7. Call the item of AFC again, adjust the level "0".
8. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

V.FREQUENCY ADJUSTMENT (VFRE)

1. Select video 1 with no connecting the signal.
2. Set to Service adjustment Mode.
3. Connect the frequency counter across connector CN131 Pin⑦ (V. DRIVE) connector and ground.
4. Select VFRE with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the $55 \pm 0.5\text{Hz}$.
6. Write the memory by pressing **[MUTING]** then **[ENTER]**.

SUB CONTRAST ADJUSTMENT (SPIX)

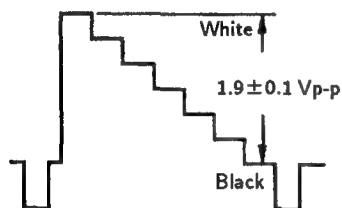
1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Set the conditions as follows.

PICTURE · · · MAX
 COLOR · · MIN
 BRIGHT · · CENTER
 R OFF · · · · · ON (1)
 G OFF · · OFF (0)
 B OFF · · · · · OFF (0)

SERVICE ROFF 1
 1000

1: ON
 0: OFF

4. Connect an oscilloscope to CN703 Pin① (R OUT) of C board and ground.
5. Select SPIX with **[1]** and **[4]**.
6. Adjust with **[3]** and **[6]** for the $1.9 \pm 0.1 \text{ V}_{p-p}$.

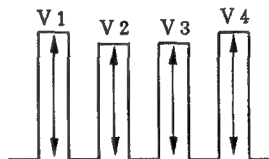


7. Write the memory by pressing **MUTING** then **ENTER**.
8. Return the following back to normal after adjustment.

PICTURE · · · · · MAX
 BRIGHT · · · CENTER
 COLOR · · · CENTER
 R OFF · · · · ON
 G OFF · · · · · ON
 B OFF · · · · · ON

SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

1. Input a color-bar signal.
2. Set to service adjustment mode.
3. Connect an oscilloscope to CN703 Pin③ (B OUT) of C board.
4. Select SHUE and SCOL with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** for the $V1=V4$ (SCOR) and $V2=V3$ (SHUE).



6. Increase the data of SCOL by 5 steps.
7. Write into the memory by pressing **MUTING** then **ENTER**.

SUB BARANCE ADJUSTMENT (SBAL)

1. Input a stereo signal.
2. Set to service adjustment mode.
3. Select SBAL with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best sound balance
5. Write into the memory by pressing **MUTING** then **ENTER**.

DISPLAY POSITION ADJUSTMENT (DISP)

1. Input a color-bar signal.
2. Set to service adjustment Mode.
3. Select DISP with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the bar center.
5. Write the memory by pressing **MUTING** then **ENTER**.

SERVICE AFC 0
 1000

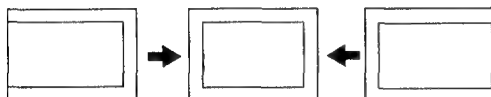
|||||||||-----

H.CENTER ADJUSTMENT (H POS)

Note: Perform this adjustment after H.FREQUENCY ADJUSTMENT (HFRE) .

1. Input a cross-hatch signal.
2. Set the Service adjustment mode.
3. Select HPOS with **[1]** and **[4]** .
4. Adjust with **[3]** and **[6]** to the best horizontal center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]** .

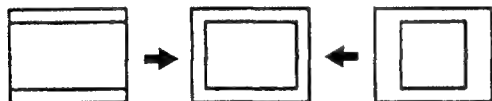
H. CENTER (HPOS)



H.SIZE ADJUSTMENT (HSIZ)

1. Input a cross-hatch signal.
2. Set to service adjustment Mode.
3. Select HSIZ with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for best horizontal size.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]** .

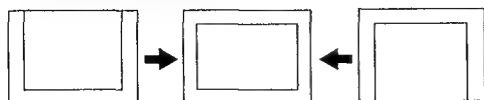
H. SIZE (HSIZ)



V.CENTER ADJUSTMENT (VPOS)

1. Input a cross-hatch signal.
2. Set to service adjustment Mode.
3. Select VPOS with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best vertical center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]** .

V. CENTER (VPOS)



V.SIZE ADJUSTMENT (VSIZ)

1. Input a cross-hatch signal.
2. Set to service adjustment Mode.
3. Select VSIZ with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best vertical size.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]** .

V. SIZE (VSIZ)



V LINEARITY(VLIN), VS CORRECTION(VSCO), PIN AMP(PAMP), CORNER PIN(CPIN), AND PIN PHASE(PPHA) ADJUSTMENTS

1. Input a cross-hatch signal.
2. Set to Service adjustment Mode.
3. Select VLIN, VSCO, PAMP, CPIN, and PPHA with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best picture.
5. Write the memory by Pressing **[MUTING]** then **[ENTER]**.

V LINEARITY (VLIN)



VS CORRECTION (VSCO)



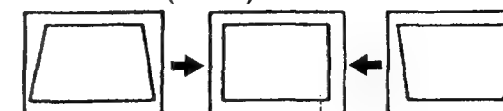
PIN AMP (PAMP)



CORNER PIN (CPIN)

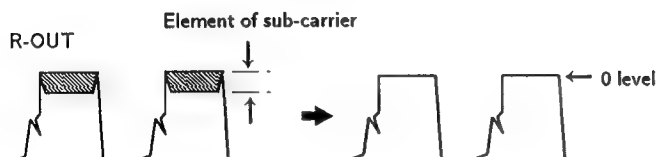


PIN PHASE (PPHA)



CROMA TRAP ADJUSTMENT (CROM)

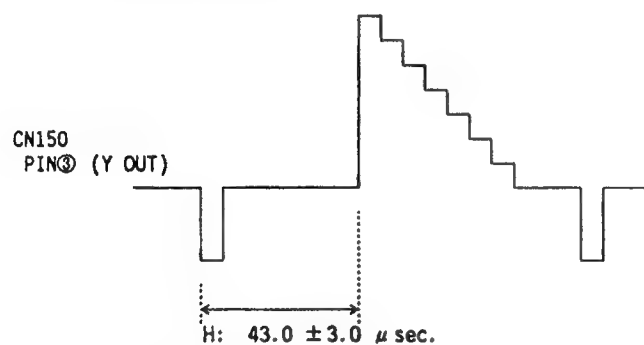
1. Input a red signal
2. Set to Service adjustment Mode.
3. Connect an oscilloscope CN703 Pin① (R OUT) of C board ground.
4. Select CROM with **1** and **4**.
5. Adjust with **3** and **6** for the 0 level.



6. Write the memory by pressing **MUTING** then **ENTER**.

5-3. P BOARD ADJUSTMENTS**P IN P H. POSITION (PHPO)**

1. Input a color-bar signal
2. Set to Service adjustment Mode.
3. Connect an oscilloscope CN150 Pin③ (Y OUT).
4. Select PHPO with **1** and **4**.
5. Adjust with **3** and **6** for the $43.0 \pm 3.0 \mu\text{sec}$ (H).



6. Write the memory by pressing **MUTING** then **ENTER**.

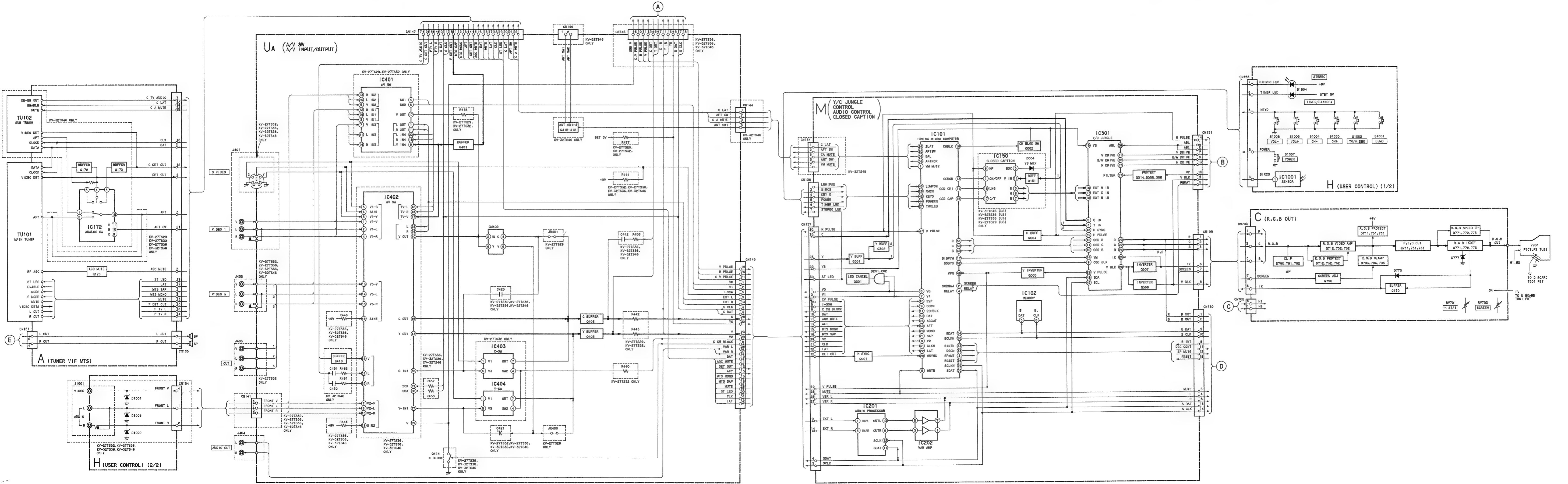
SECTION 6
DIAGRAMS

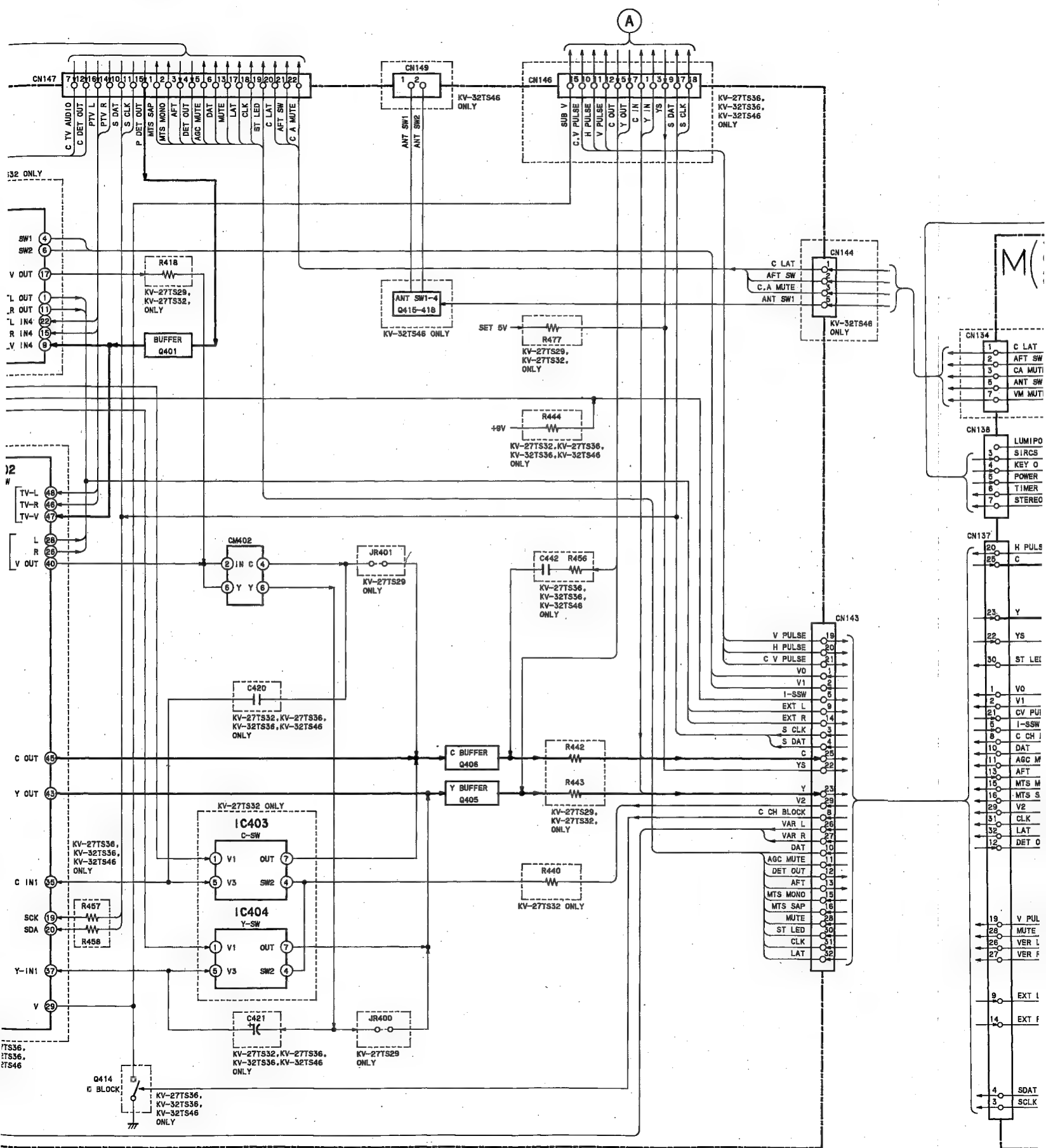
KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

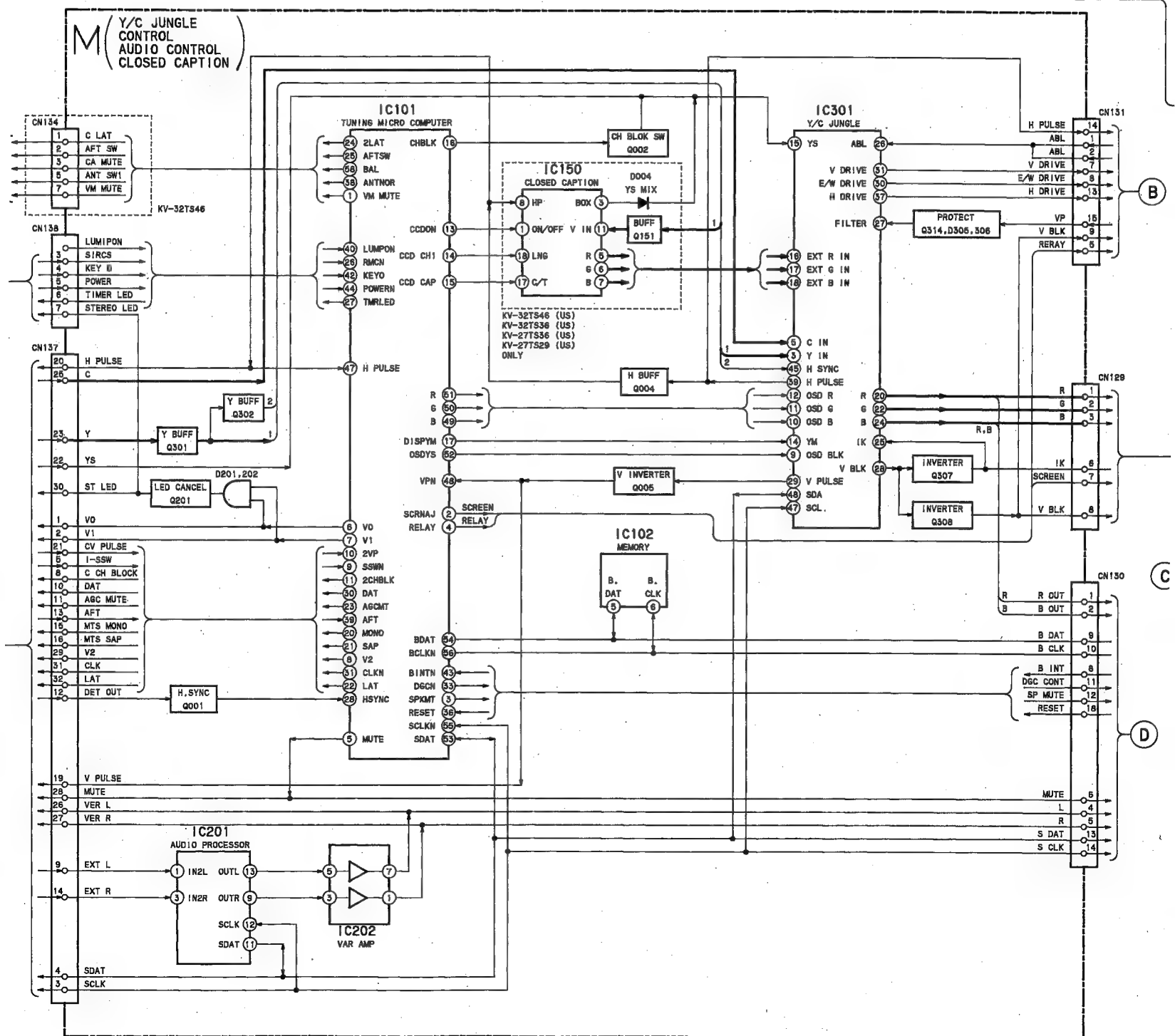
KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

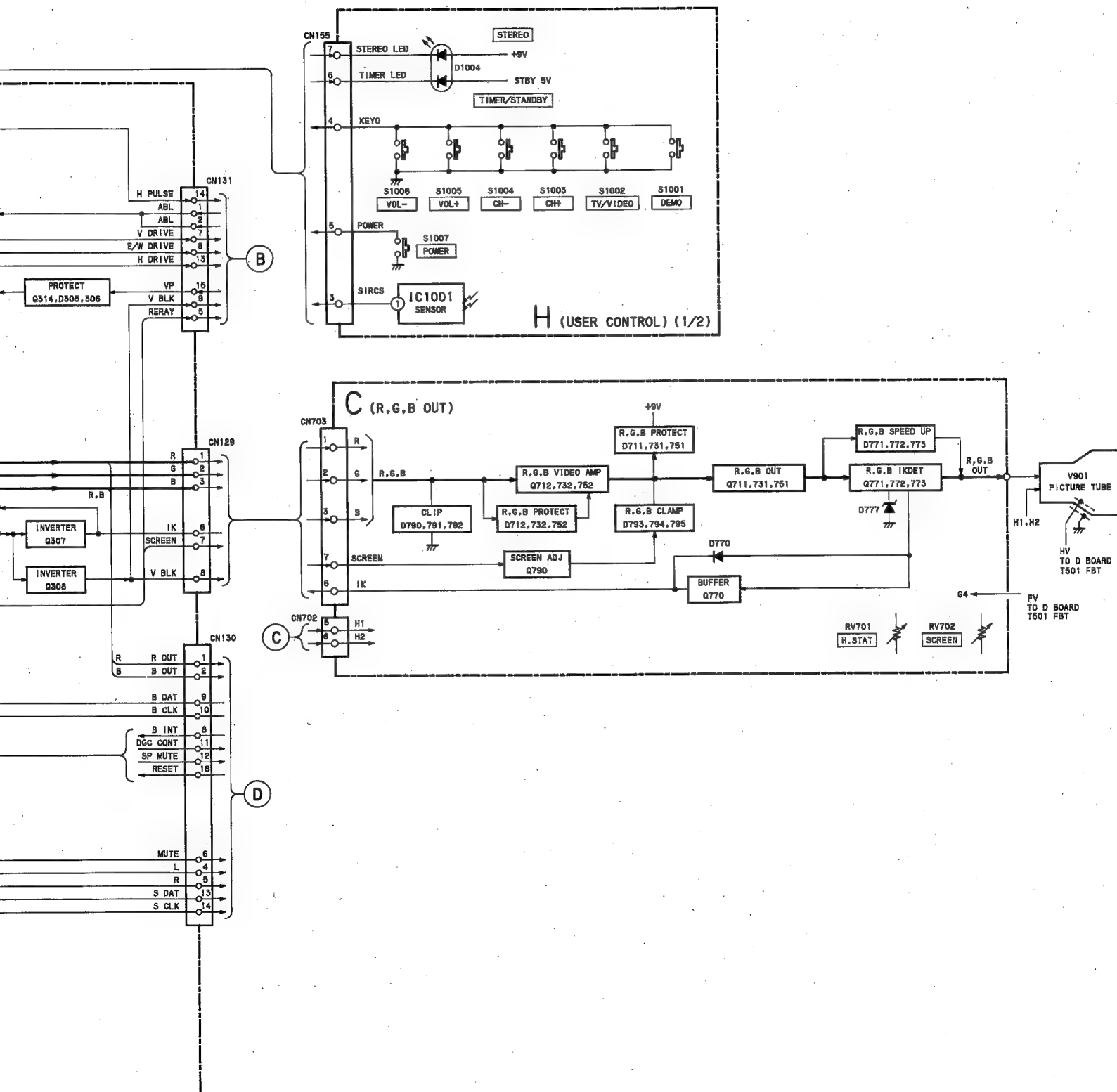
KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

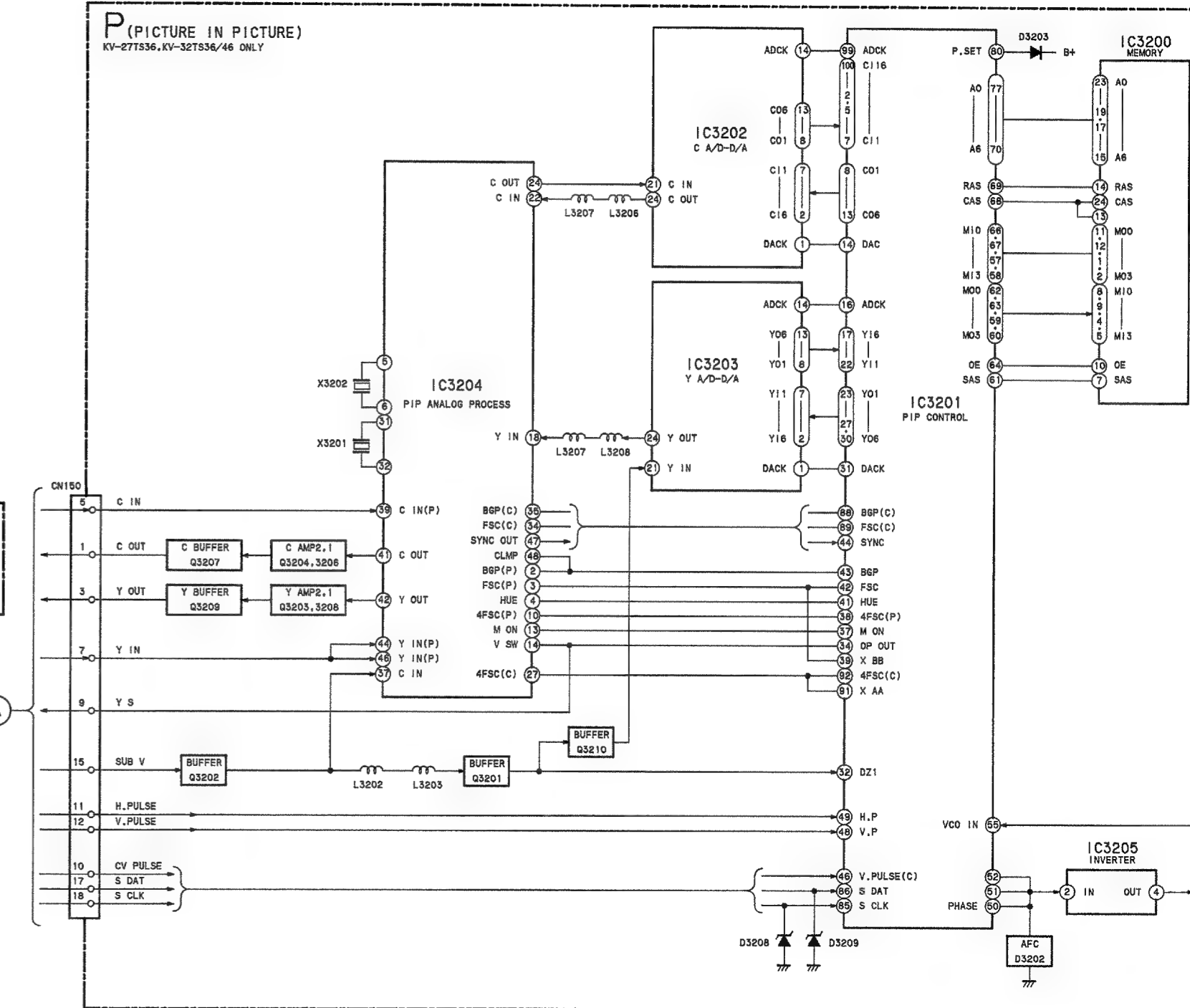
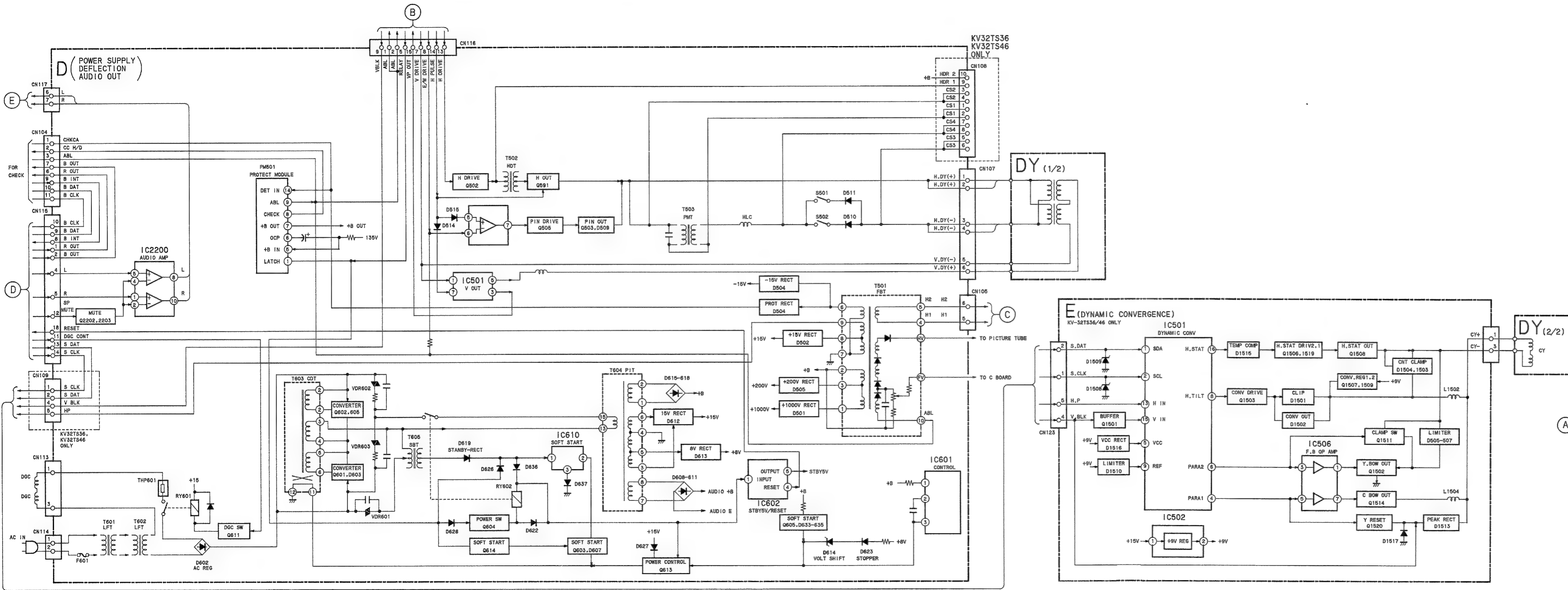


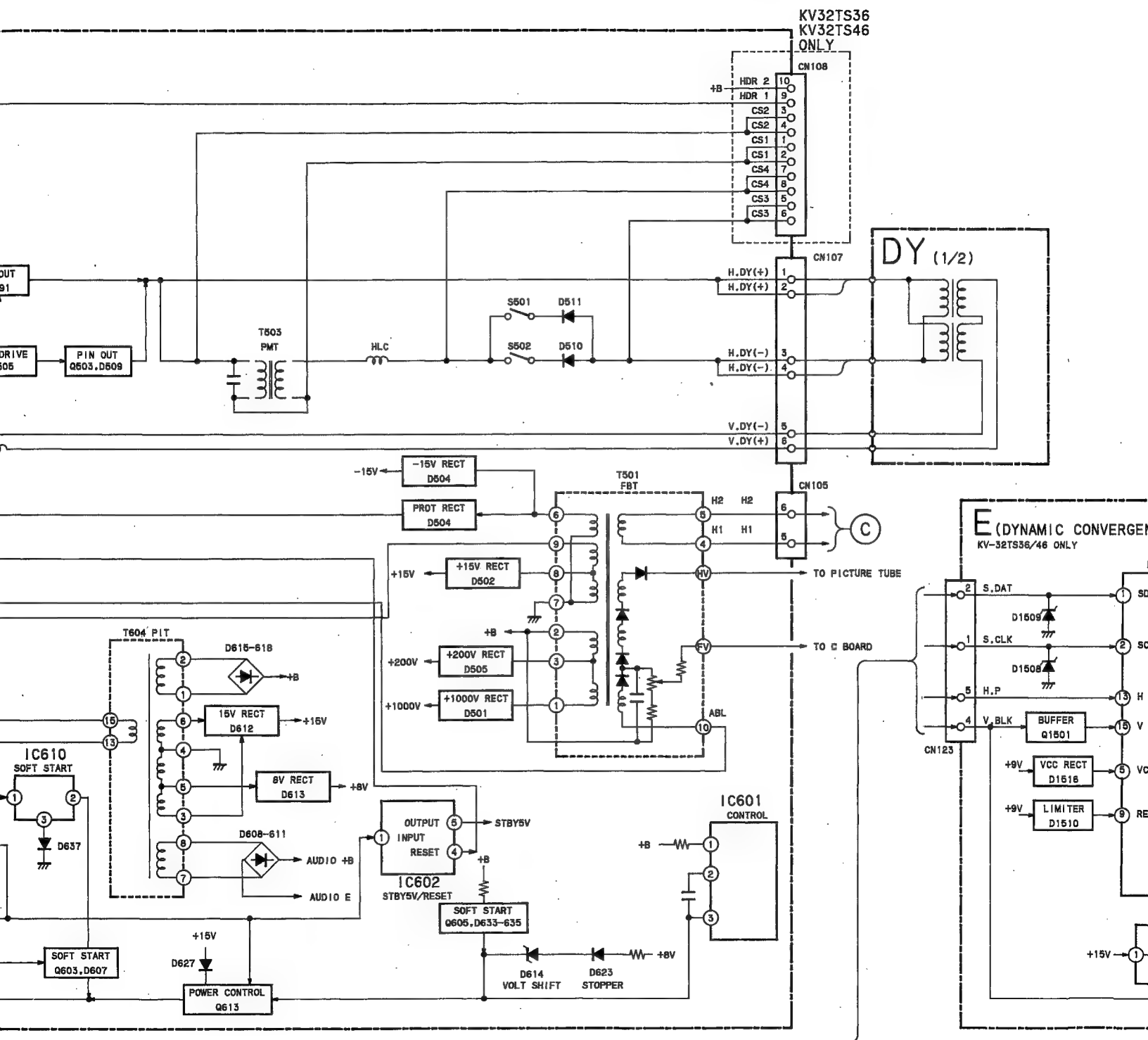






BLOCK DIAGRAMS (2)





36/46 ONLY

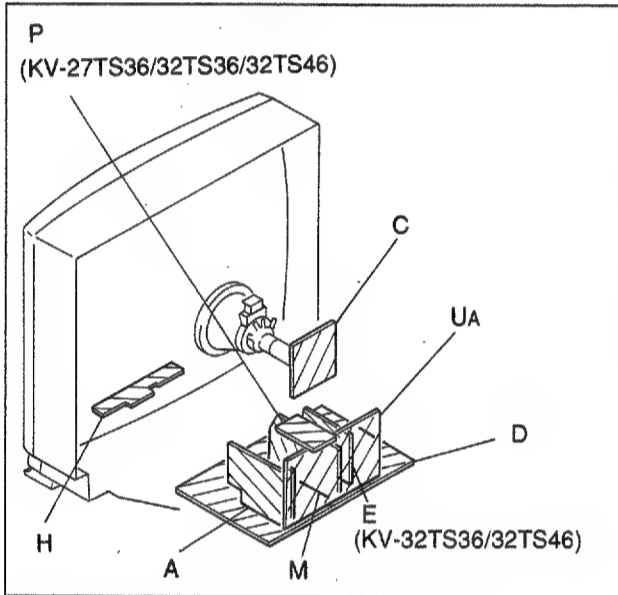




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6-3. CIRCUIT BOARDS LOCATION



6-4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

- Note:**
- All capacitors are in μF unless otherwise noted.
 - pF: μF 50WV or less are not indicated except for electrolytic and tantalums.
 - All electrolytics are in 50V unless otherwise specified.
 - Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power 1/4W

- Chips resistors are 1/10W.
- All resistors are in ohms.
- k Ω =1000 Ω , M Ω =1000k Ω
- \square : nonflammable resistor.
- \square : fusible resistor.
- \triangle : internal component.
- \square : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- \perp : earth-ground. (cool)
- \perp : earth-chassis. (hot)
- The components identified by \blacksquare in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
- Should replacement be required, replace only with the value originally used.
- When replacing components identified by \blacksquare , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by \blacksquare and repeat the adjustment until the specified value is achieved. (Refer to R511 and R524 on page 41, 42)
- When replacing the part in below table be sure to perform the related adjustment.

Part replaced (\blacksquare)	Adjustment (\blacksquare)
PM501, R511, R632, R645, R650, R338	D BOARD M BOARD HOLD-DOWN (R511)
IC601, PM501, D504, C598, R509, R524, R632, R635, R645, T501, R338	D BOARD M BOARD HOLD-DOWN (R524)

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 M Ω digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- Circled numbers are waveform references.
- \square : B+ line.
- \square : B- line.
- \square : signal path.

Reference information

RESISTOR	: RN METAL FILM
	: RC SOLID
	: FPRD NONFLAMMABLE CARBON
	: FUSE NONFLAMMABLE FUSIBLE
	: RW NONFLAMMABLE WIREWOUND
	: RS NONFLAMMABLE METAL OXIDE
	: RB NONFLAMMABLE CEMENT
	: * ADJUSTMENT RESISTOR
COIL	: LF-8L MICRO INDUCTOR
CAPACITOR	: TA TANTALUM
	: PS STYROL
	: PP POLYPROPYLENE
	: PT MYLAR
	: MPS METALIZED POLYESTER
	: MPP METALIZED POLYPROPYLENE
	: ALB BIPOLAR
	: ALT HIGH TEMPERATURE
	: ALR HIGH RIPPLE

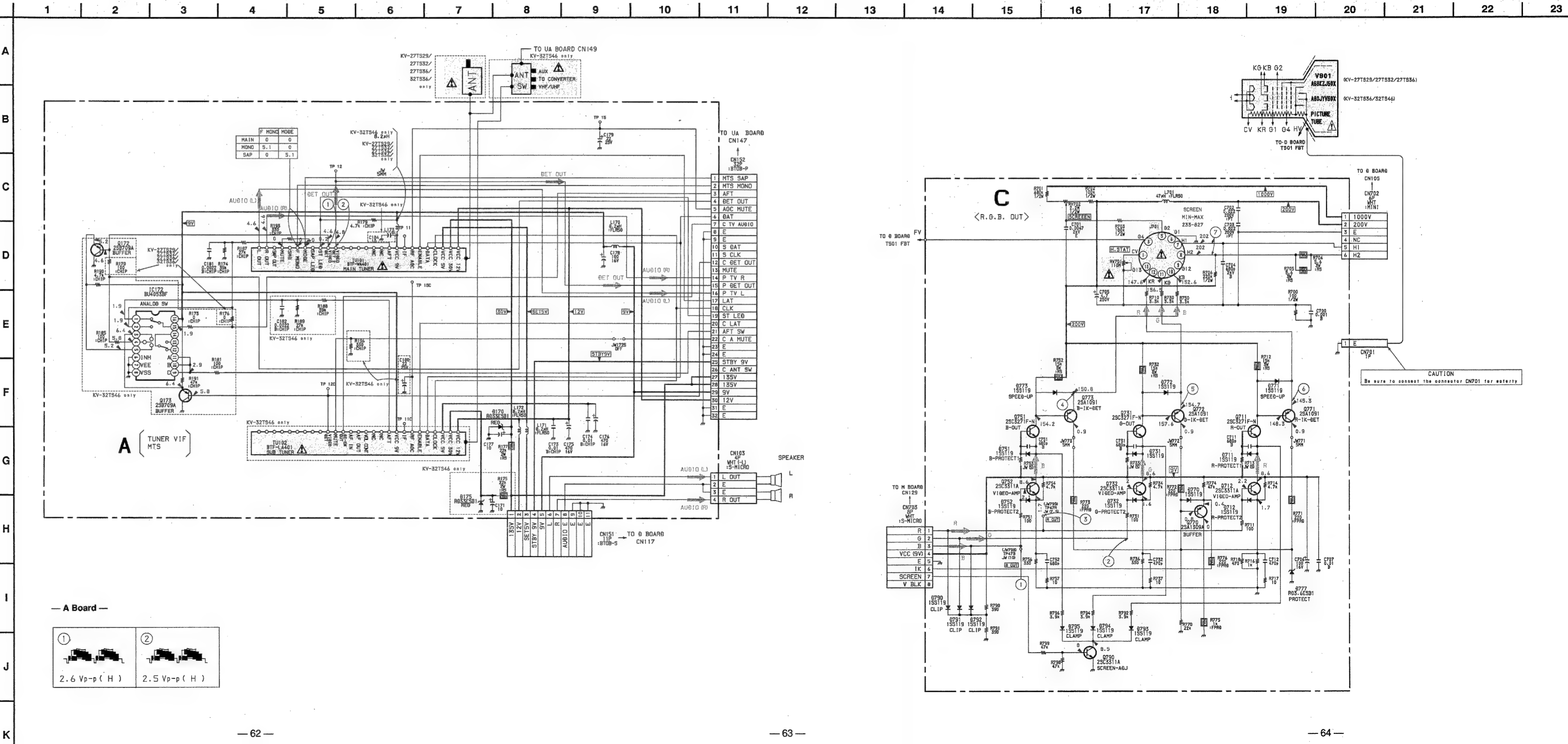
Note: The symbol \triangle display is on the component side.

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

The symbol \square indicate fast operating fuse. Replace only with fuse of same rating as marked.

Note: Les composants identifiés par un trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Le symbole \square indique une fusible à action rapide. Doit être remplacée par une fusible de même valeur, comme marqué.



KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

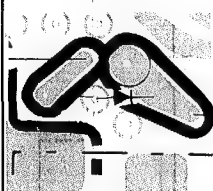
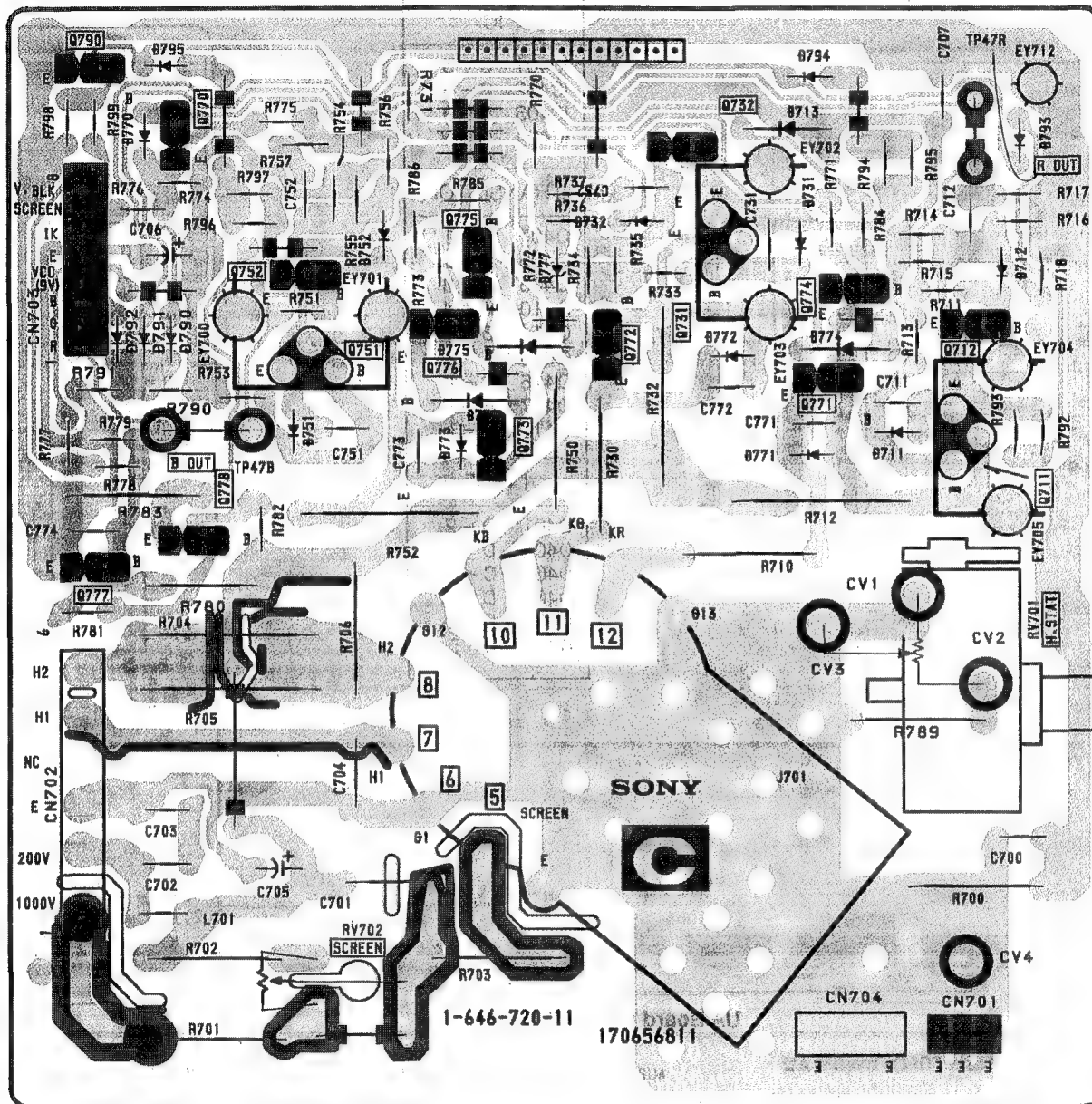
KV-32TS36/32TS46

RM-Y116 RM-Y118
SA-W200

C

[R.G.B. OUT]

— C Board —



NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

KV-27TS29/27TS32/27TS36
RM-Y118 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

KV-27TS29/27TS32/27TS36
RM-Y118 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

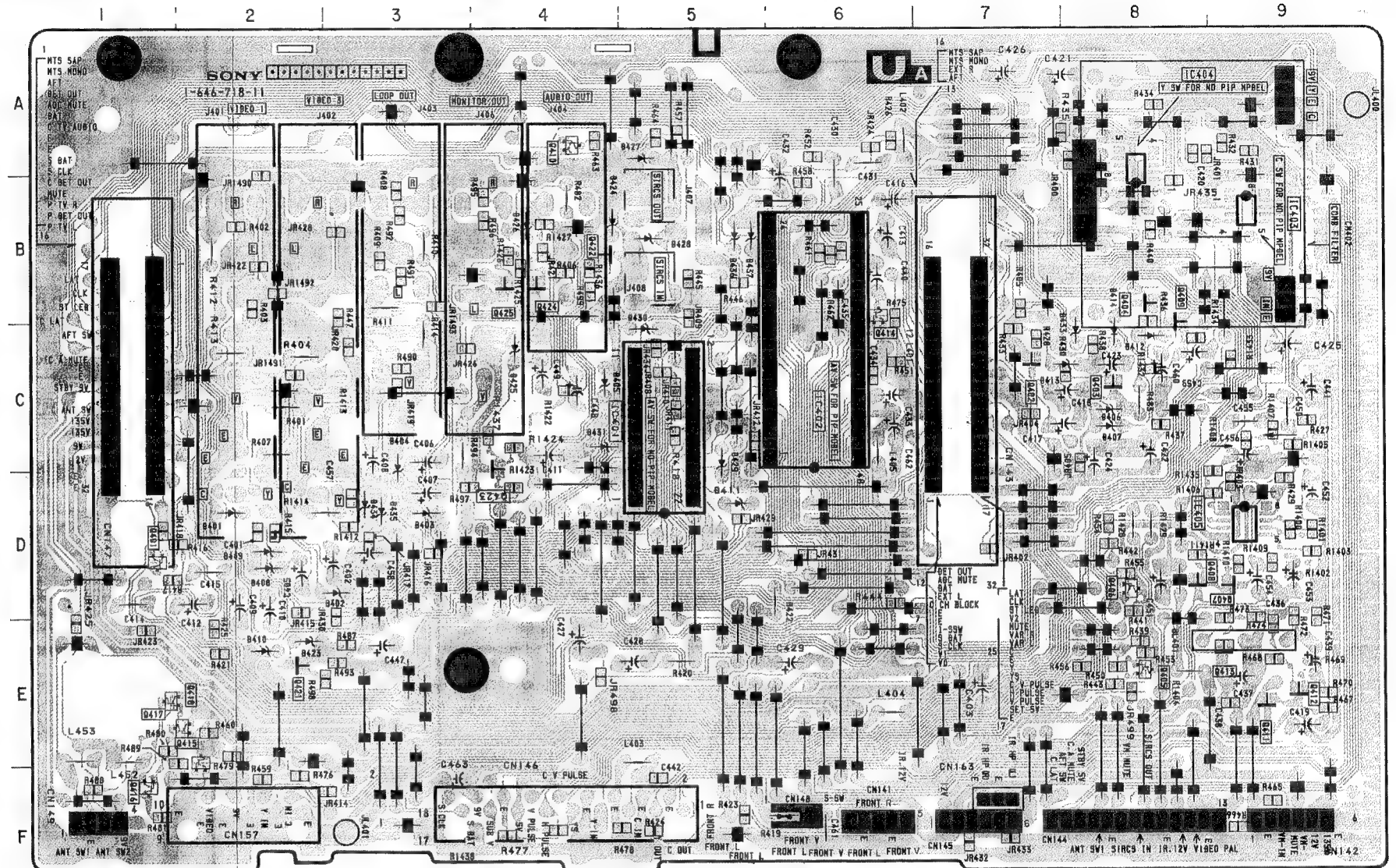
UA

[AV SW, A/V INPUT, AV OUTPUT]

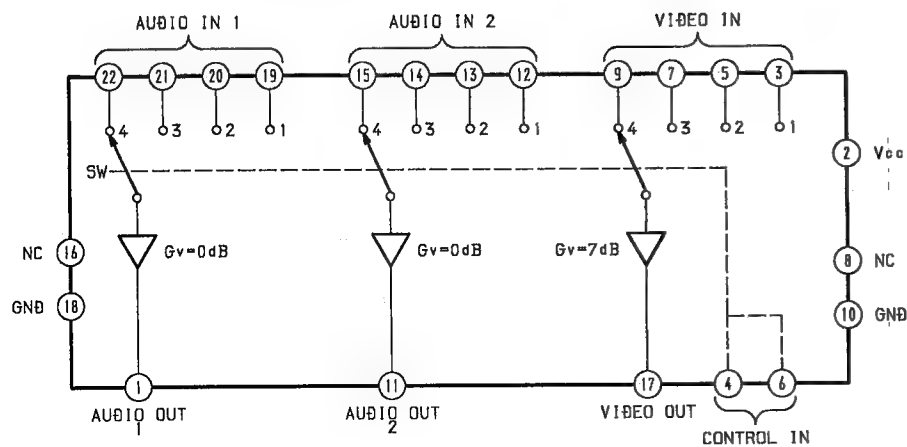
— UA Board —

IC	
IC401	C-5
IC402	C-6
IC403	B-9
IC404	A-8
TRANSISTOR	
Q401	D-1
Q405	E-8
Q406	D-8
Q410	A-4
Q414	B-6
Q415	E-2
Q416	F-1
Q417	E-1
Q418	E-1
DIODE	
D401	D-2
D402	D-3
D405	C-4
D408	D-2
D436	B-5
D437	B-5

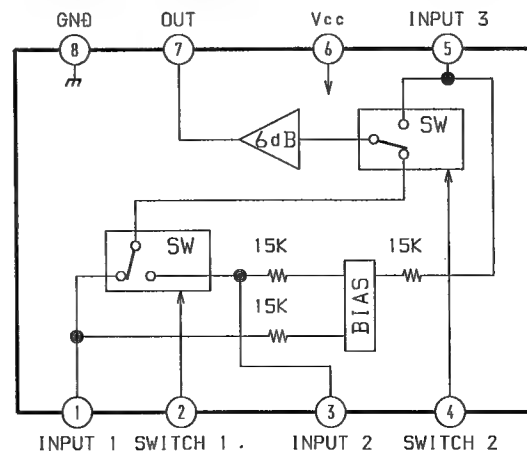
— UA Board —



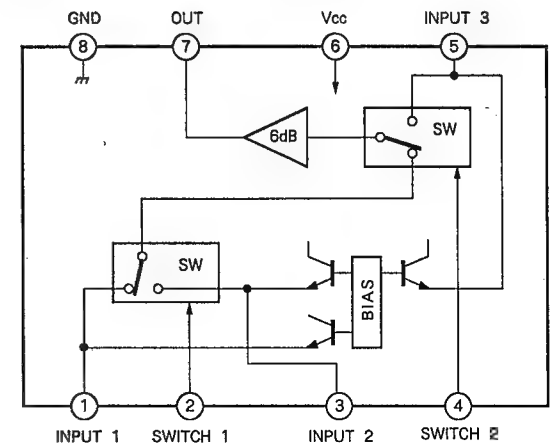
UA Board IC401 M5470AP



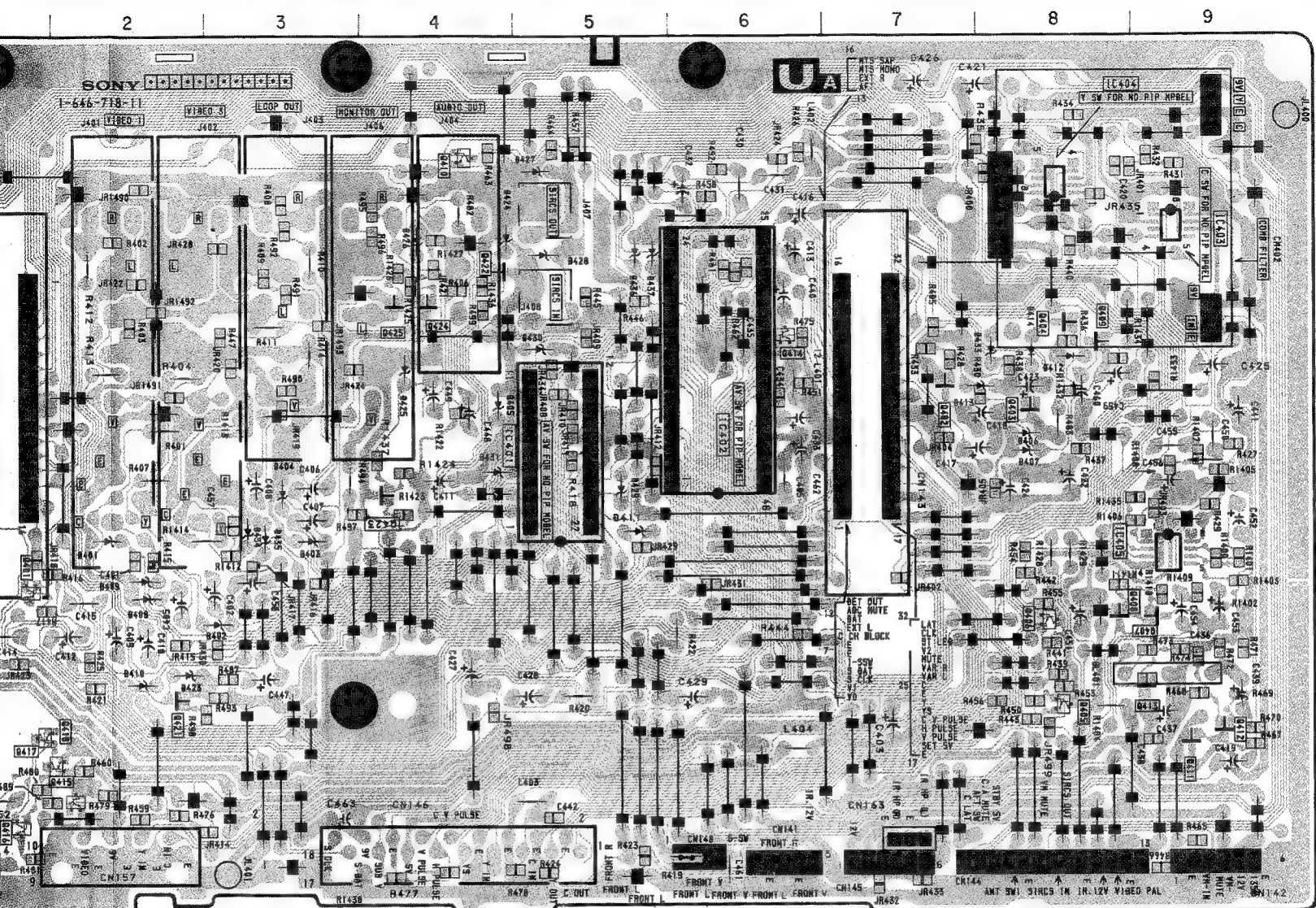
UA Board IC403 MM1114XFF



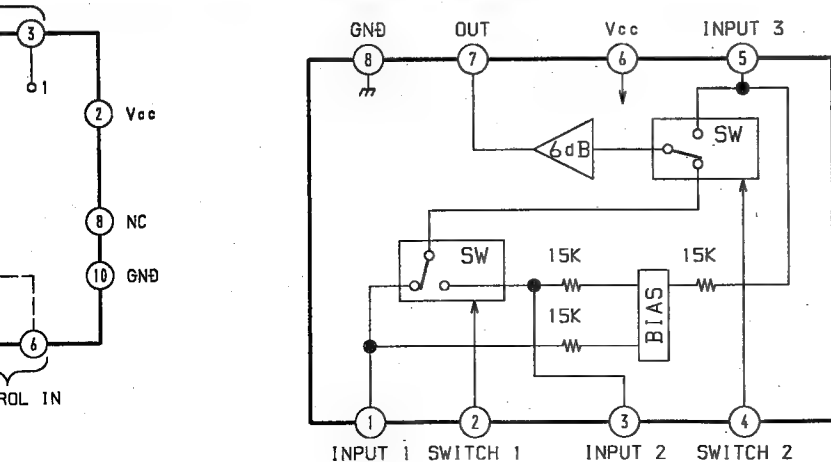
UA Board IC404 MM1118XFF



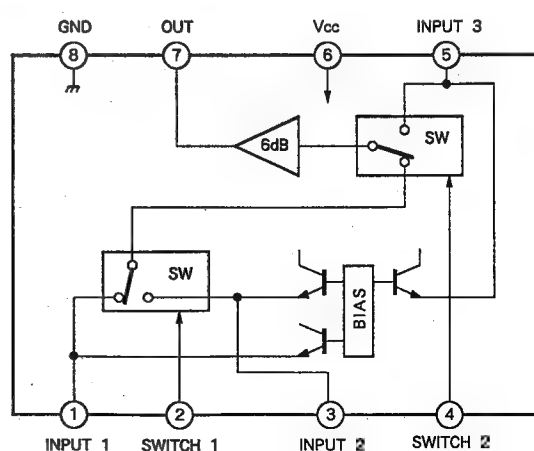
[V, AV INPUT, AV OUTPUT]



UA Board IC403 MM1114XFF

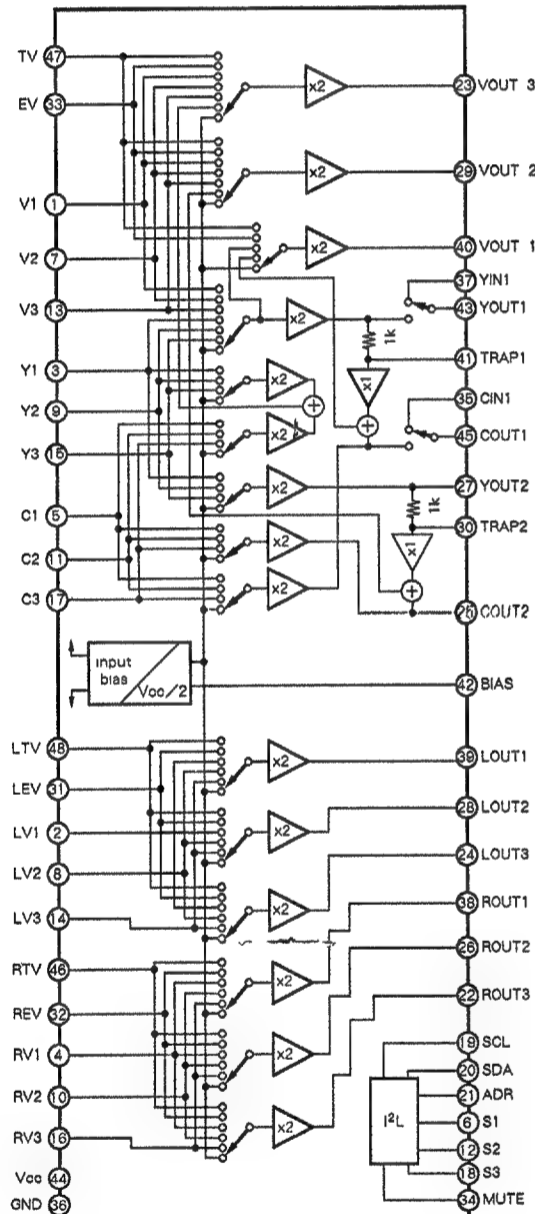


UA Board IC404 MM1118XFF

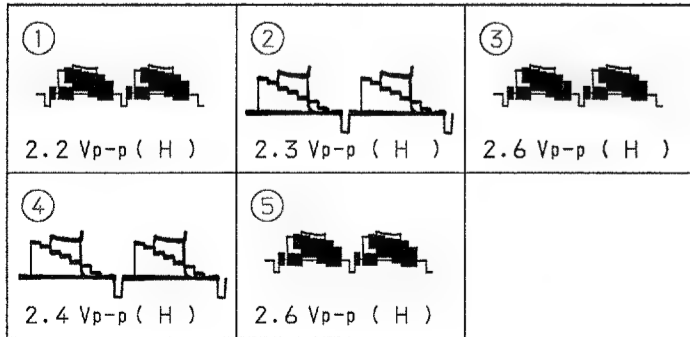


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UA Board IC402 CXA1545AS



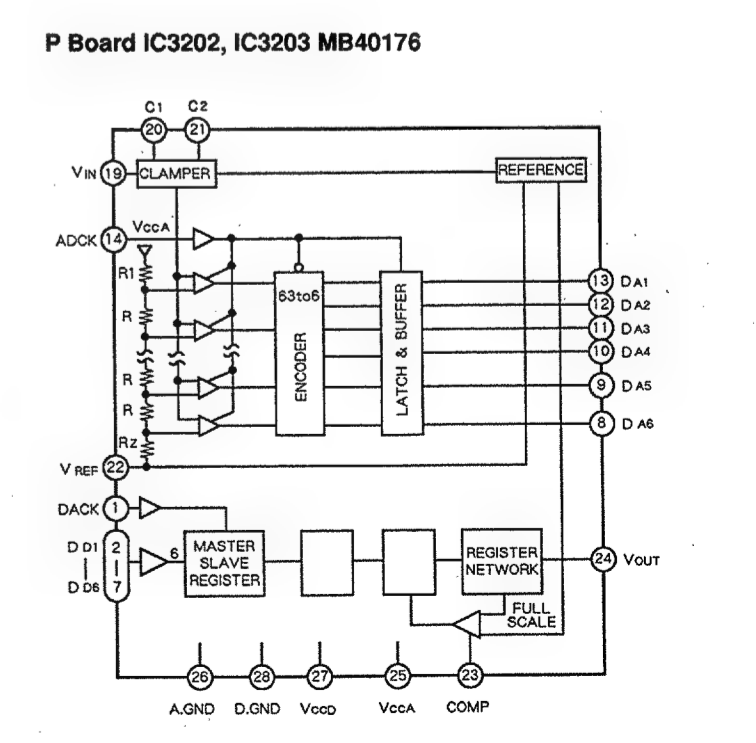
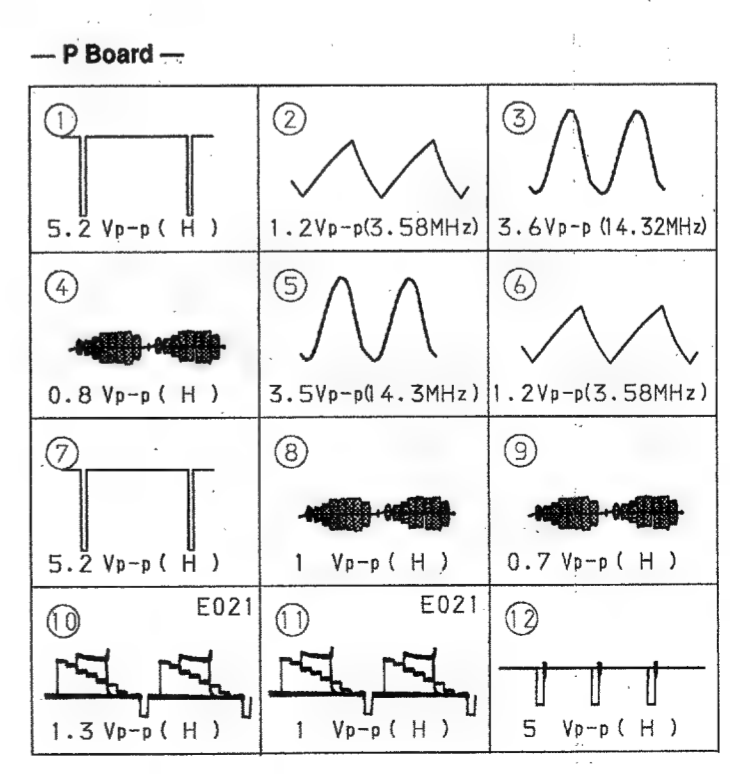
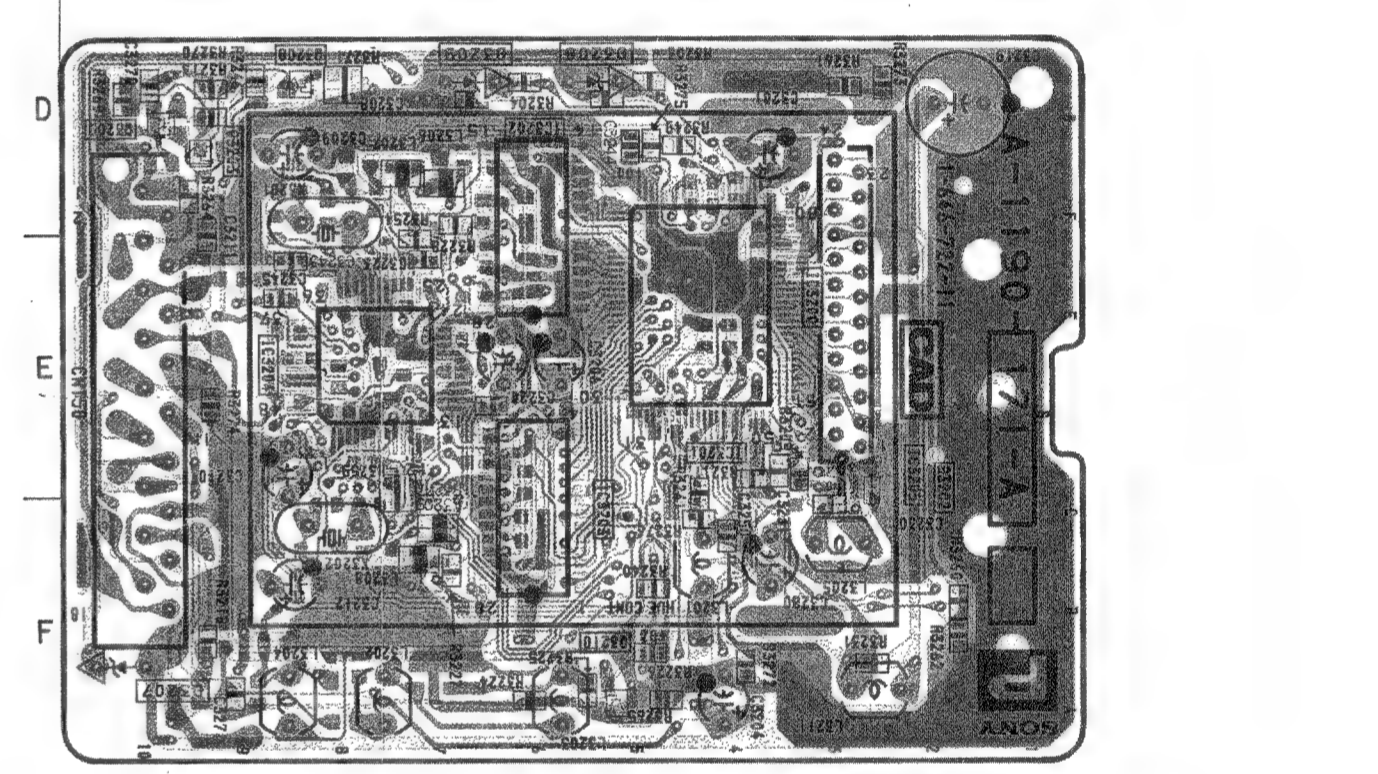
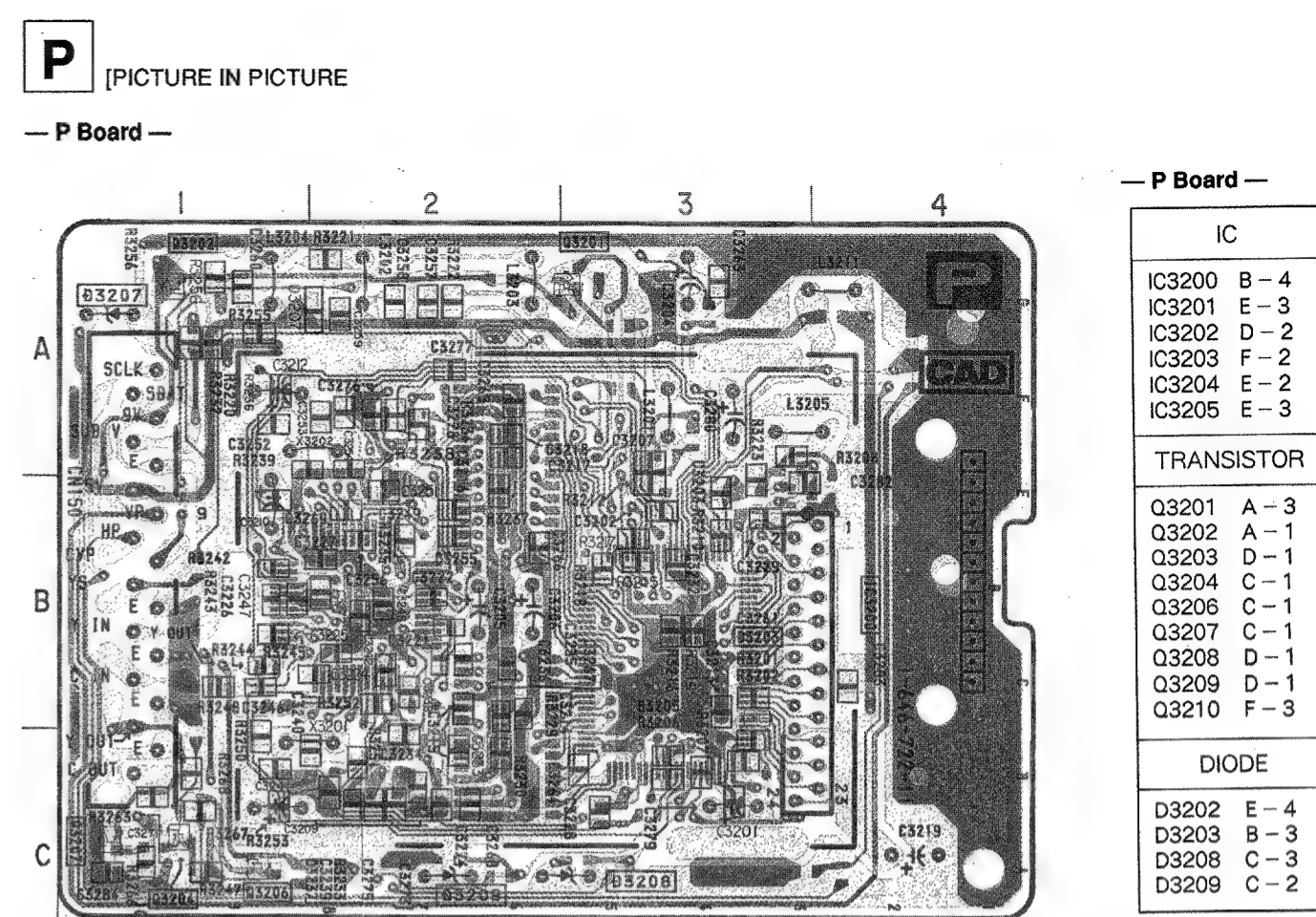
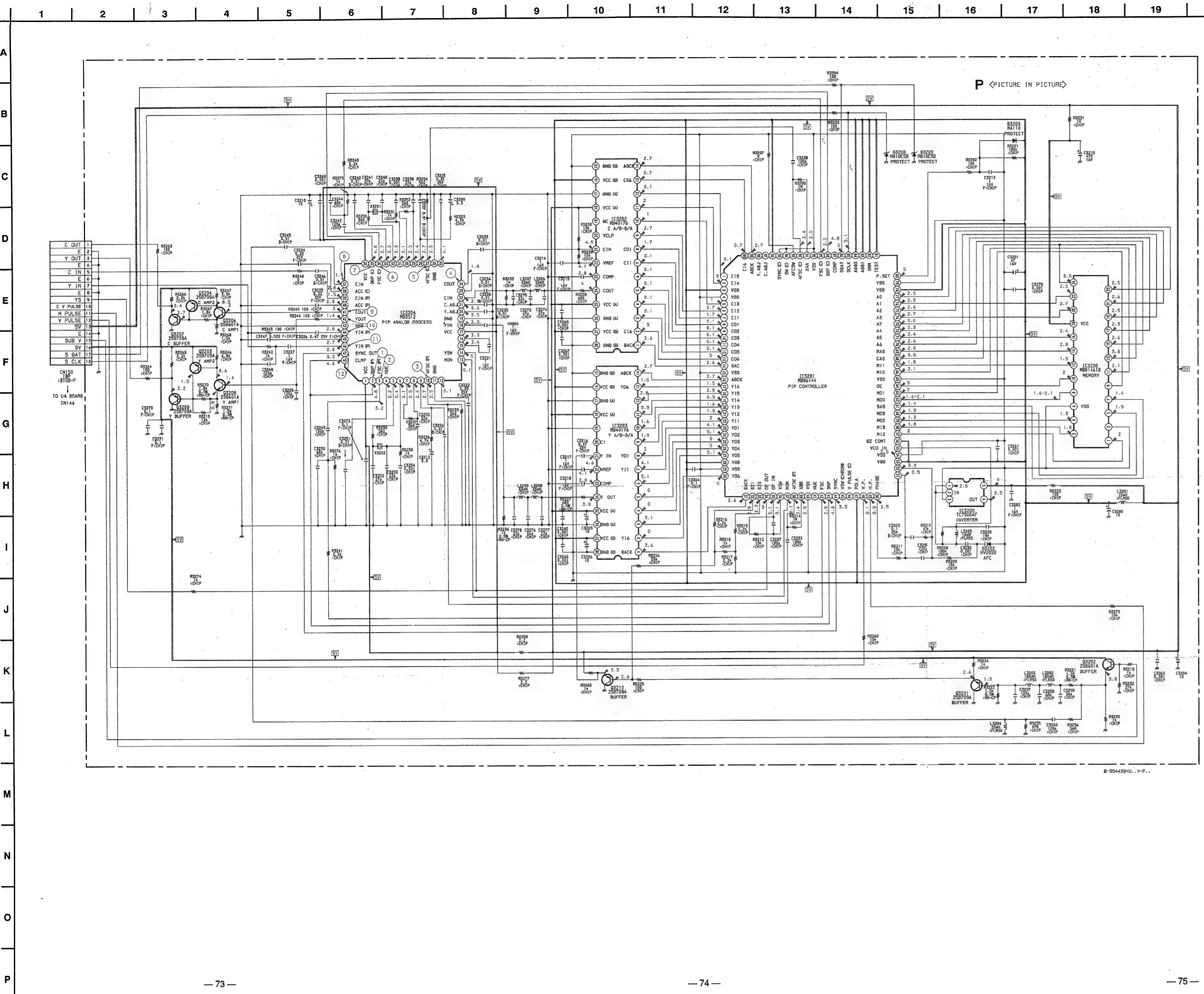
— UA Board —

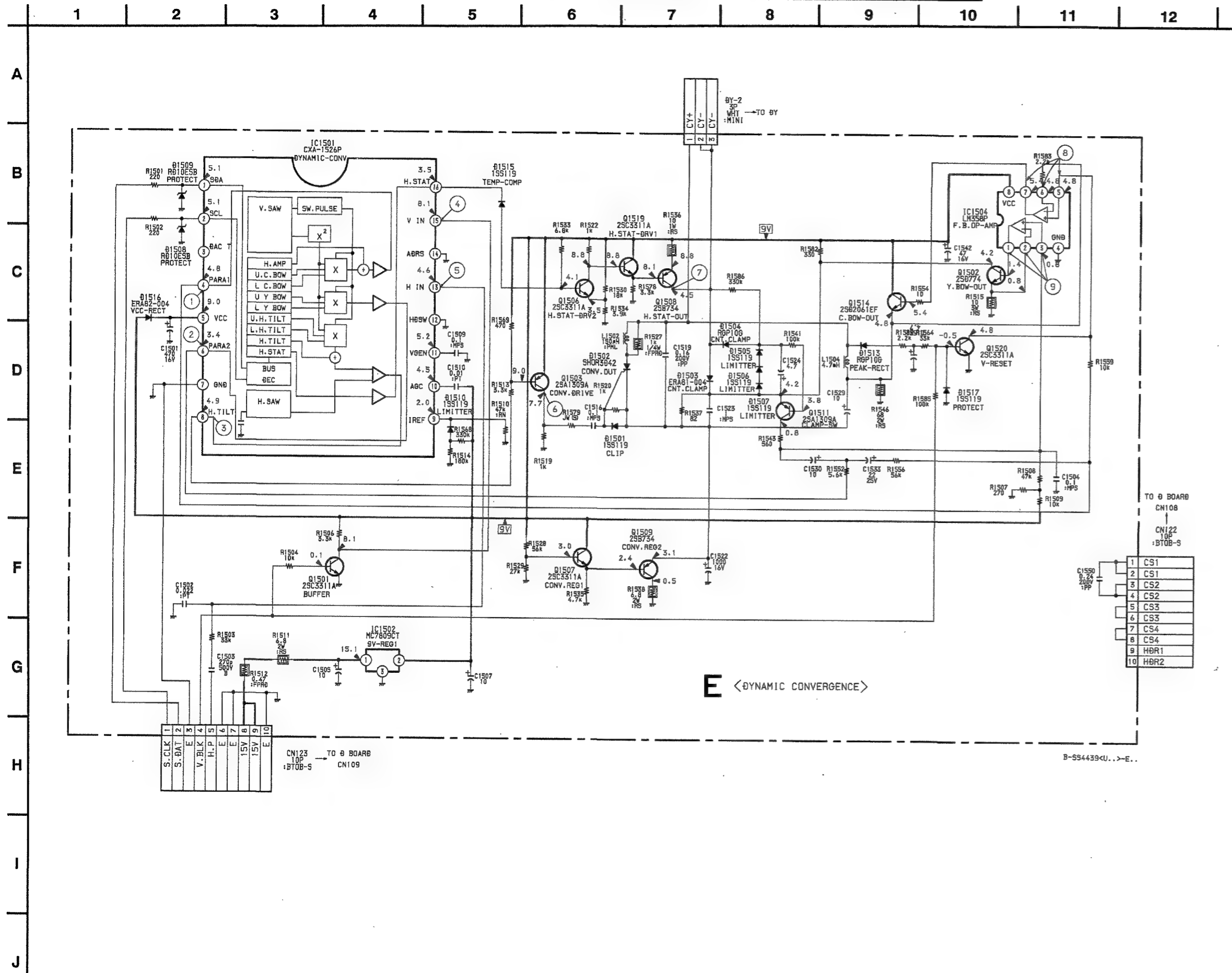


UA
(A/V SW
A/V INPUT
A/V OUTPUT)

— UA Board —

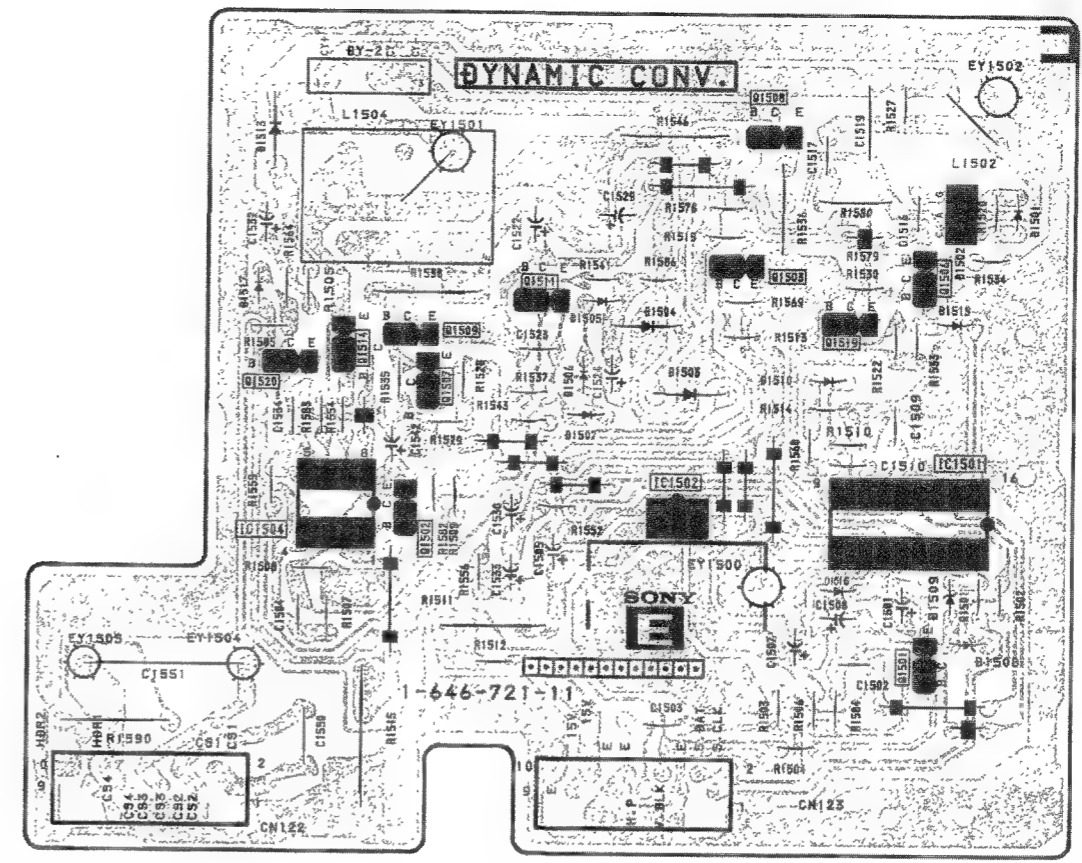
	KV-32TS46	KV-27TS36 KV-32TS36	KV-27TS32	KV-27TS29
C401	0 01 F CHIP	0 01 F CHIP	0 01 F CHIP	-
C405	22 25V	22 25V	22 25V	-
C406	1	1	1	-
C407	1	1	1	-
C408	22 25V	22 25V	22 25V	-
C411	-	-	100 25V	100 25V
C420	0 01 F CHIP	0 01 F CHIP	0 01 F CHIP	-
C421	22 25V	22 25V	0 27	-
C427	JW (S)	JW (S)	JW (S)	-
C428	JW (S)	JW (S)	JW (S)	-
C429	JW (S)	JW (S)	JW (S)	-
C430	1	-	-	-
C431	1	-	-	-
C432	22 25V	-	-	-
C433	33 25V	33 25V	-	-
C434	100P CHIP	100P CHIP	-	-
C440	10	10	-	-
C442	100P CHIP	100P CHIP	-	-
CN141	5P WHT-L S-MICRO	5P WHT-L S-MICRO	5P WHT-L S-MICRO	-
CN144	8P WHT-L S-MICRO	-	-	-
CN145	18P BT0B-S	18P BT0B-S	-	-
CN149	4P WHT-L S-MICRO	-	-	-
D401	RD10ESB	RD10ESB	RD10ESB	-
D405	RD10ESB	RD10ESB	RD10ESB	-
D408	RD10ESB	RD10ESB	RD10ESB	-
D436	RD10ESB	RD10ESB	-	-
D437	RD10ESB	RD10ESB	-	-
IC401	-	-	M52470AP	M52470AP
IC402	CXA1545AS	CXA1545AS	-	-
IC403	-	-	MM118XFF	-
IC404	-	-	MM118XFF	-
J401	S TERMINAL BLOCK	S TERMINAL BLOCK	S TERMINAL BLOCK	PIN JACK BLOCK
J402	PIN JACK BLOCK	PIN JACK BLOCK	PIN JACK BLOCK	-
J403	-	-	PIN JACK BLOCK	-
J404	-	-	-	-
J405	-	-	-	-
J406	-	-	-	-
J407	-	-	-	-
J408	-	-	-	-
J409	-	-	-	-
J410	-	-	-	-
J411	-	-	-	-
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J487	-	-	-	-
J488	-	-	-	-
J489	-	-	-	-
J490	-	-	-	-
J491	-	-	-	-
J492	-	-	-	-



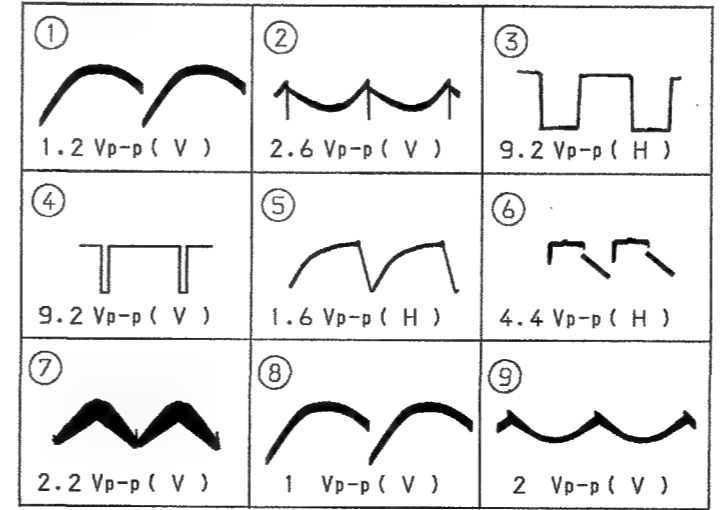


E [DYNAMIC CONVERGENCE]

— E Board —



— E Board —



9

10

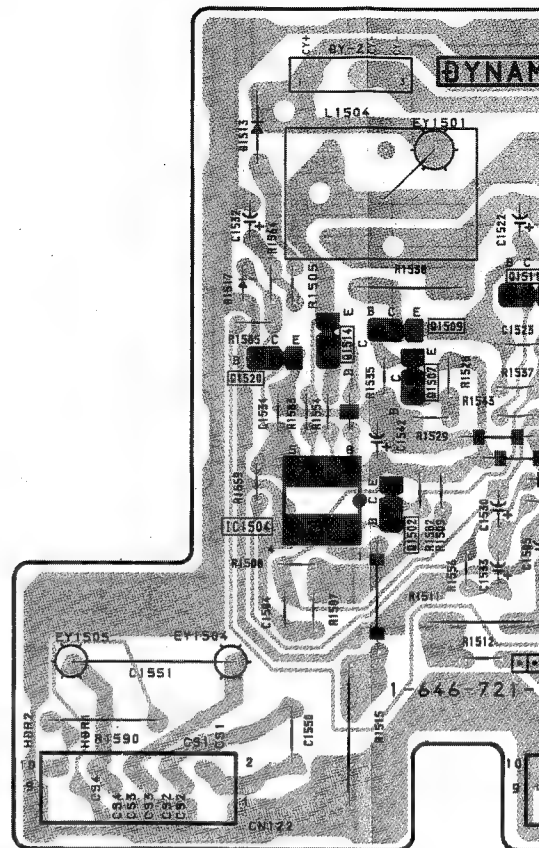
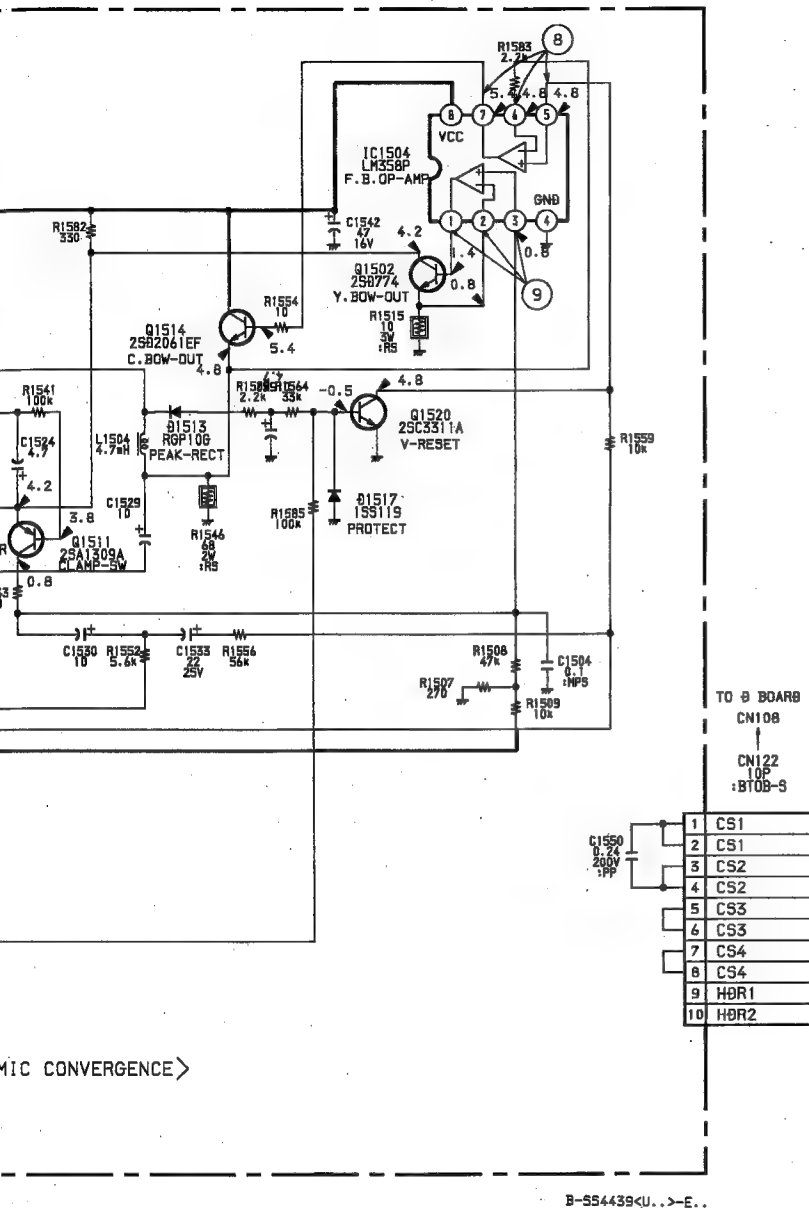
11

12

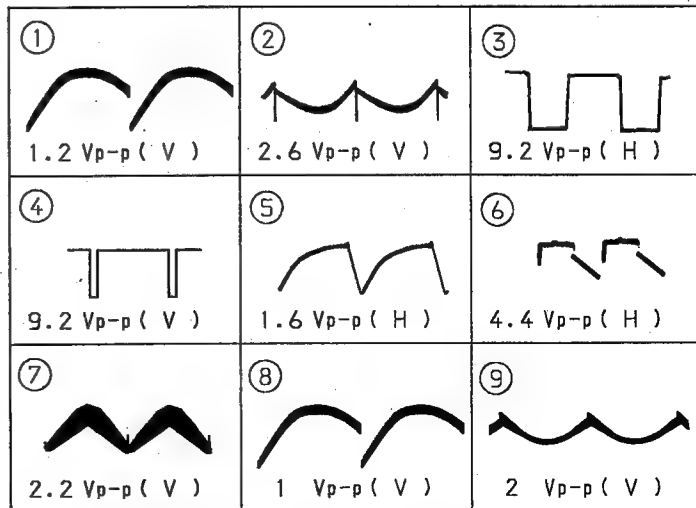
E

[DYNAMIC CONVERGENCE]

— E Board —



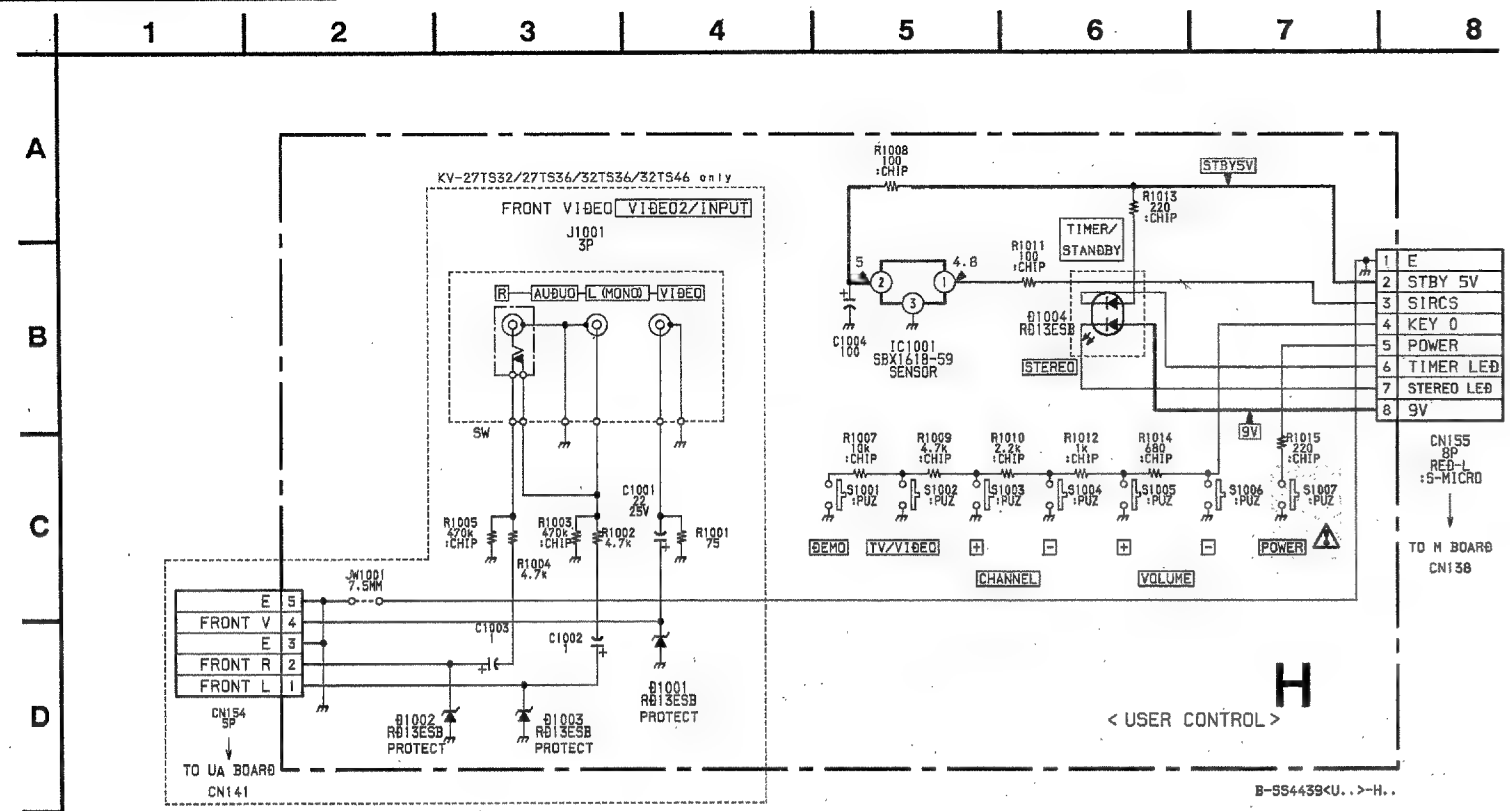
— E Board —



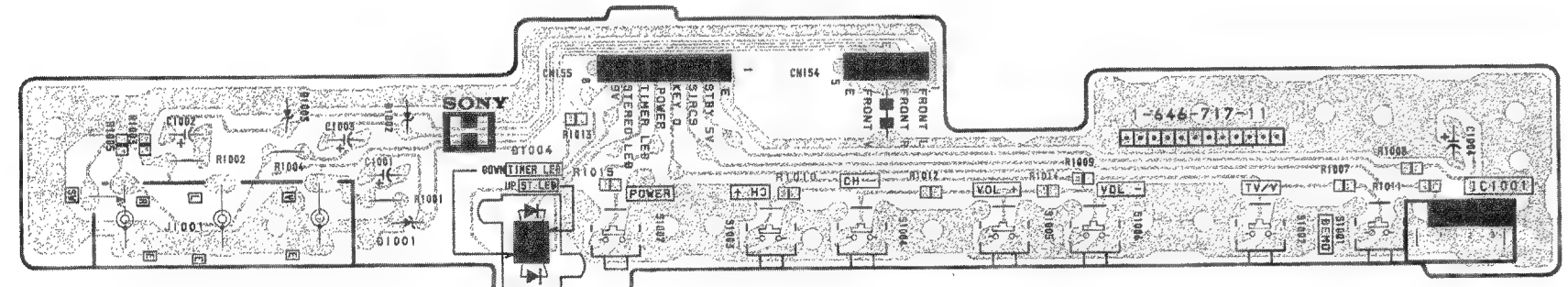
KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

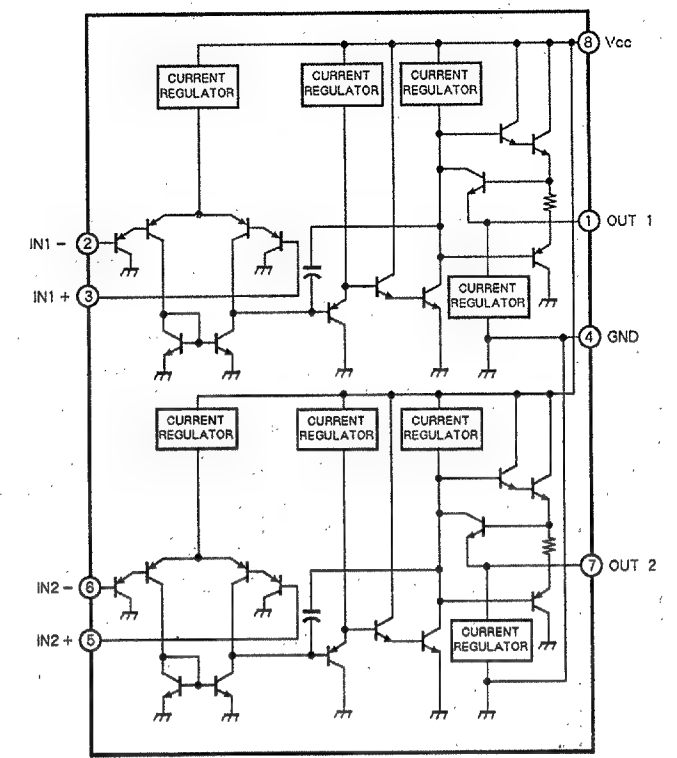
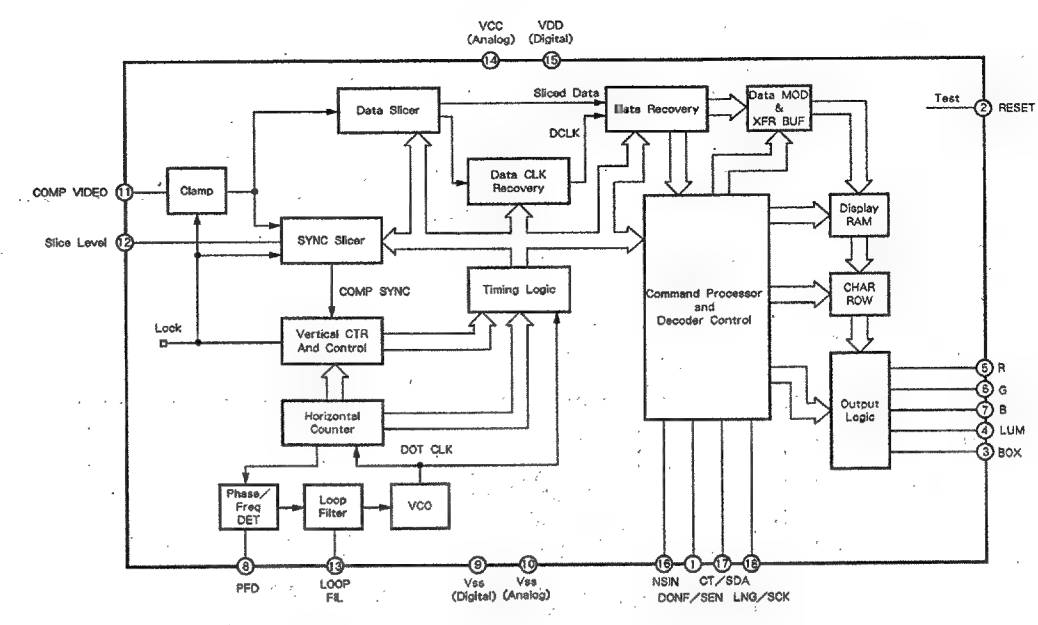
M Board IC202 LM358PS



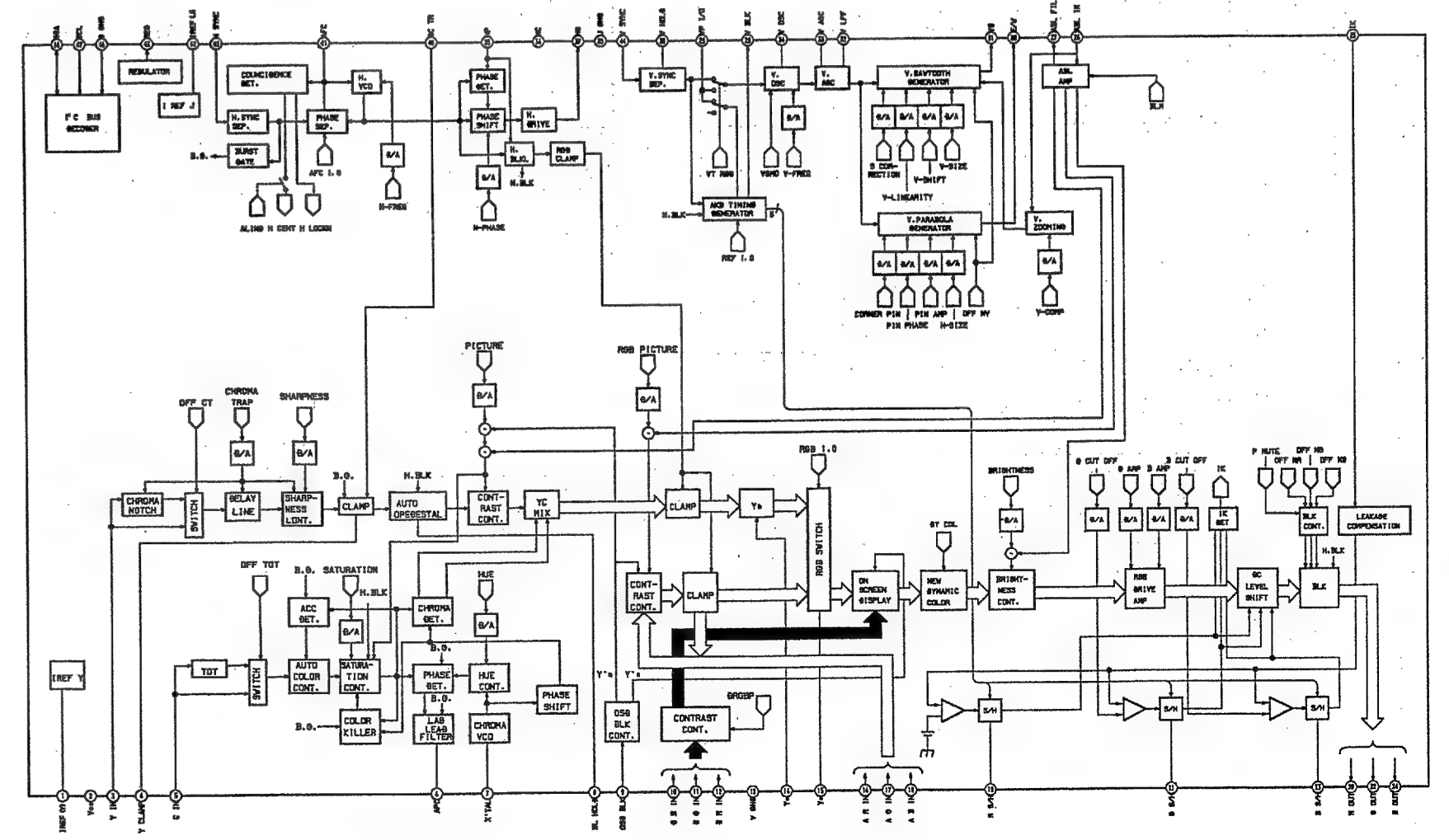
H [USER CONTROL]
— H Board —



M Board IC150 MC144143



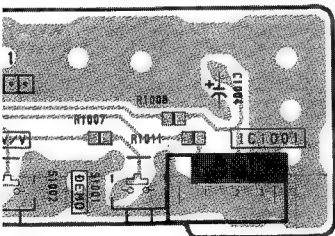
M Board IC301 CXA1465AS



E
STBY 5V
SIRCS
KEY 0
POWER
TIMER LED
STEREO LED
9V

CN155
BP
RED-L
:S-MICRO

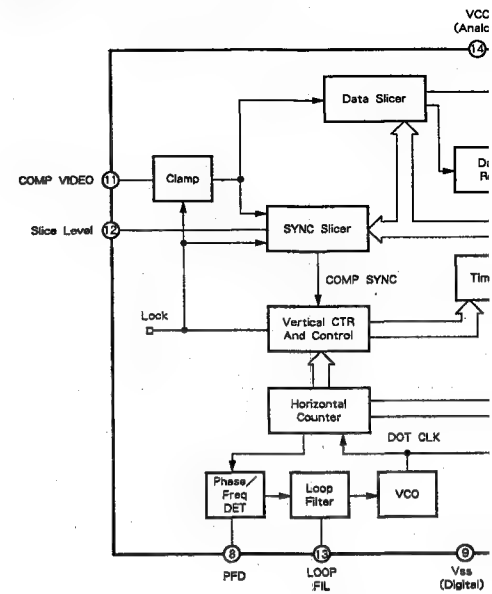
TO M BOARD
CN138



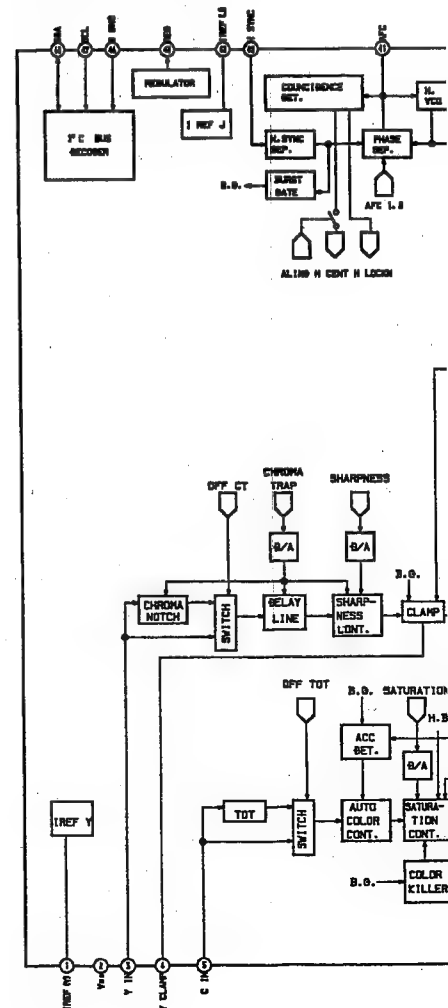
KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

KV-27TS29
RM-Y116
KV-32TS36
RM-Y118

M Board IC150 MC144143



M Board IC301 CXA1465AS



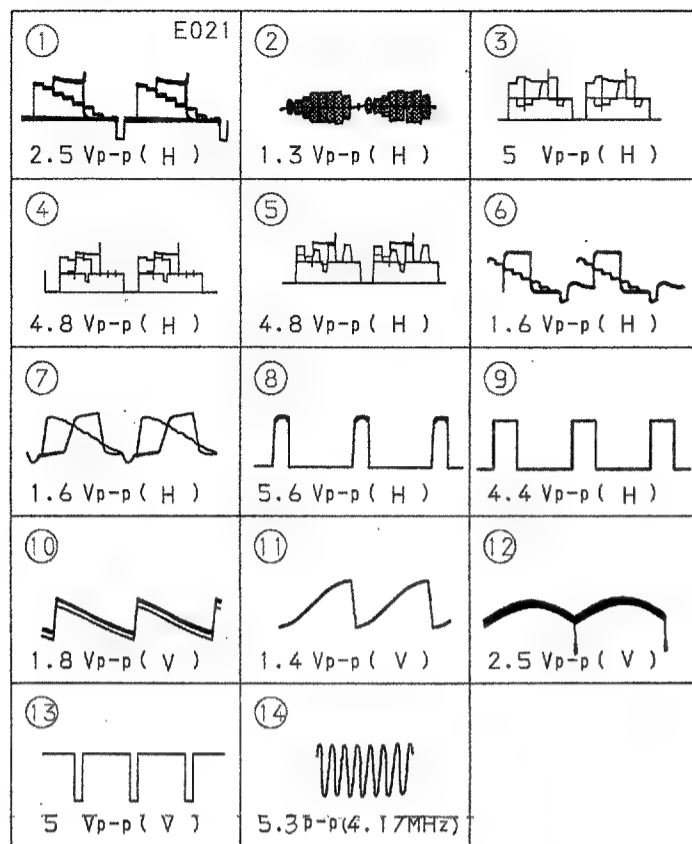


— M Board —

— M Board —

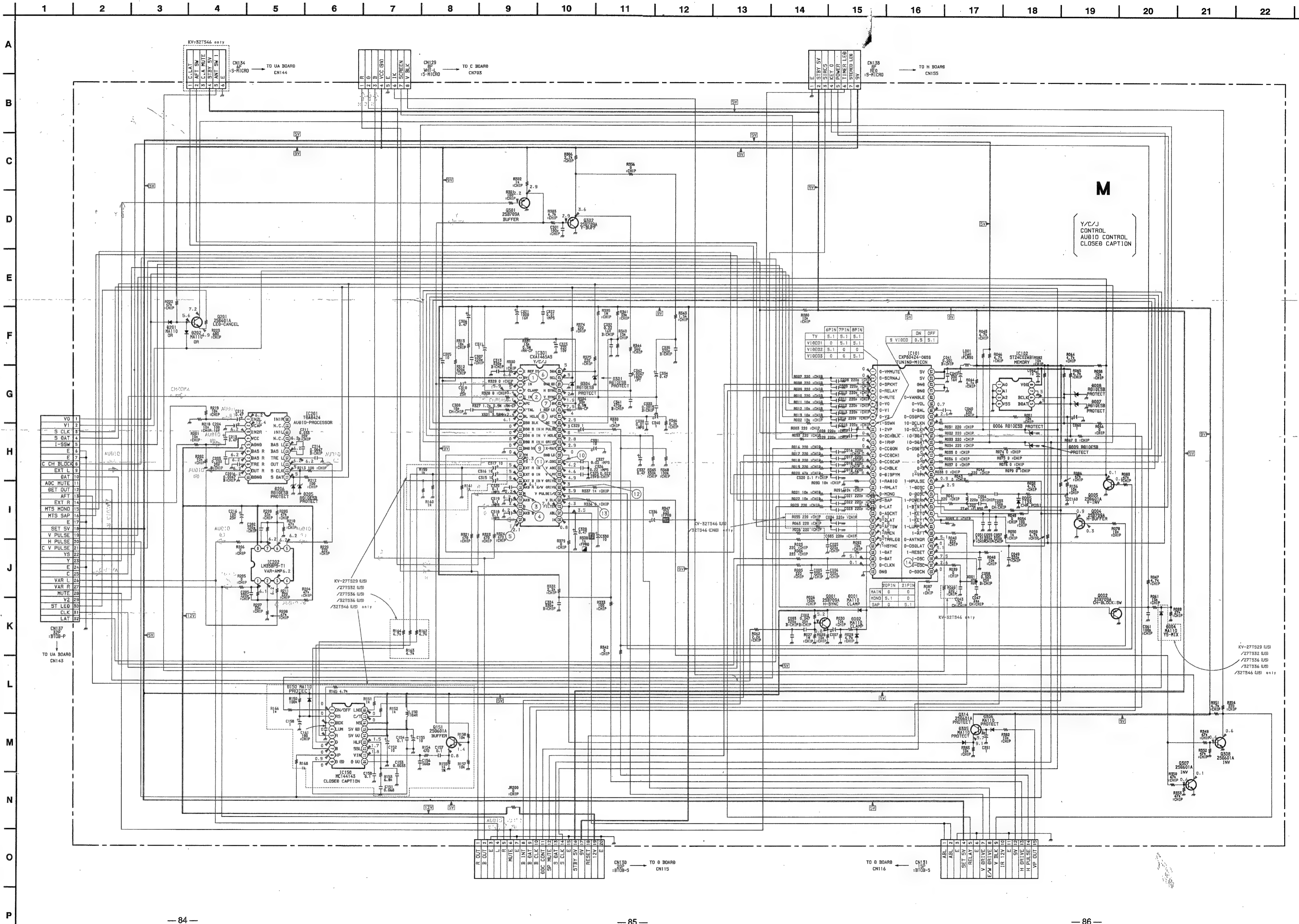
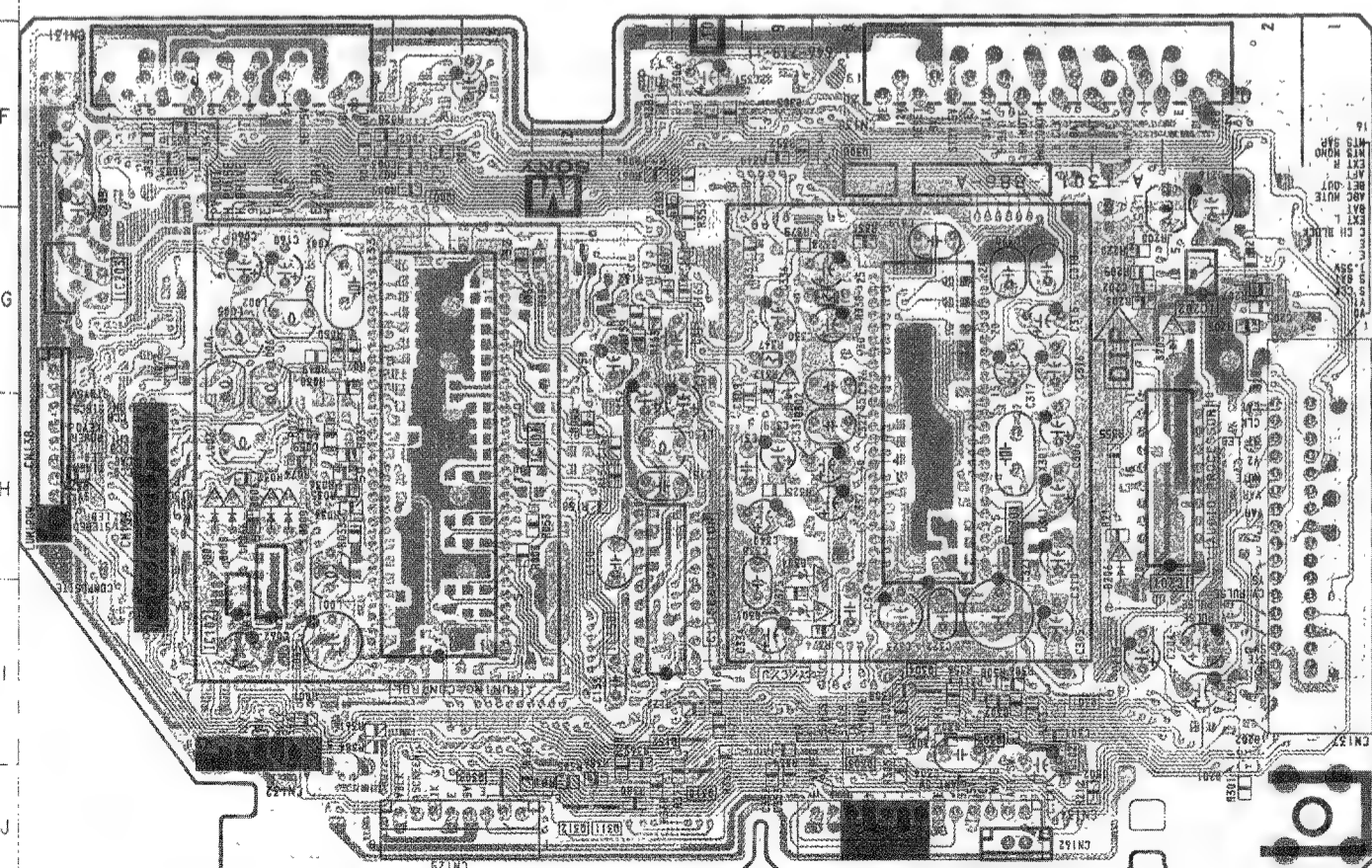
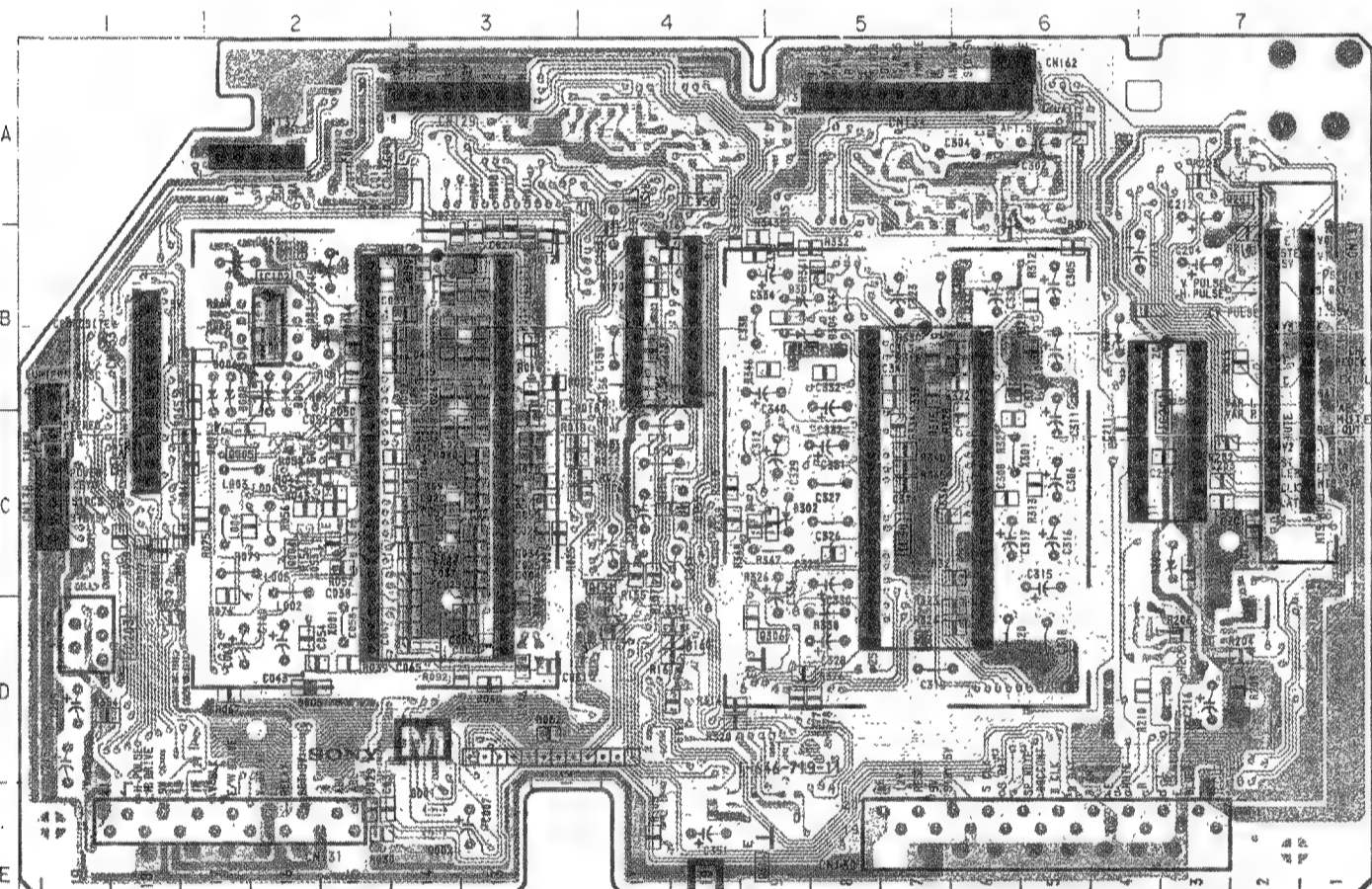
IC	DIODE
IC101 C-3	D001 E-3
IC102 B-2	D002 E-3
IC150 B-4	D004 F-14
IC201 C-7	D005 D-12
IC202 C-7	D006 B-12
IC301 C-5	D007 B-12
D008 B-12	D009 B-12
D009 B-12	D150 C-4
D201 J-7	D202 I-7
D205 C-7	D206 B-6
D301 B-5	D304 B-5
D305 F-5	D306 F-4

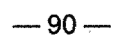
TRANSISTOR	DIODE
Q001 F-3	D201 J-7
Q002 D-4	D202 I-7
Q004 C-2	D205 C-7
Q005 C-2	D206 B-6
Q151 D-4	D301 B-5
Q201 A-7	D304 B-5
Q301 I-6	D305 F-5
Q302 I-6	D306 F-4
Q307 G-4	
Q308 F-5	
Q314 E-4	

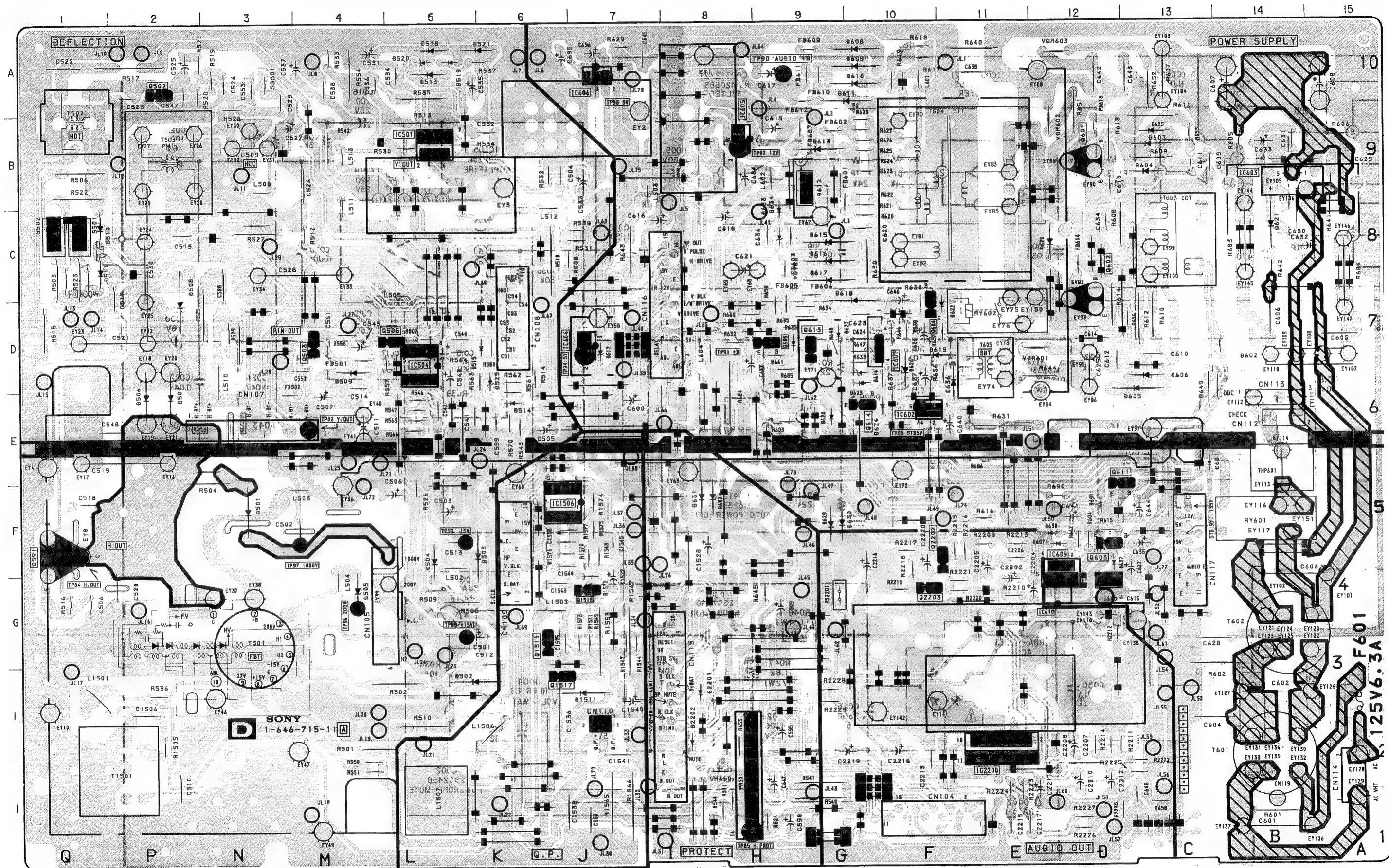


M Y/C/J, CONTROL, AUDIO CONTROL
CLOSED CAPTION

— M Board —

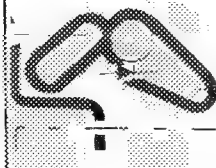






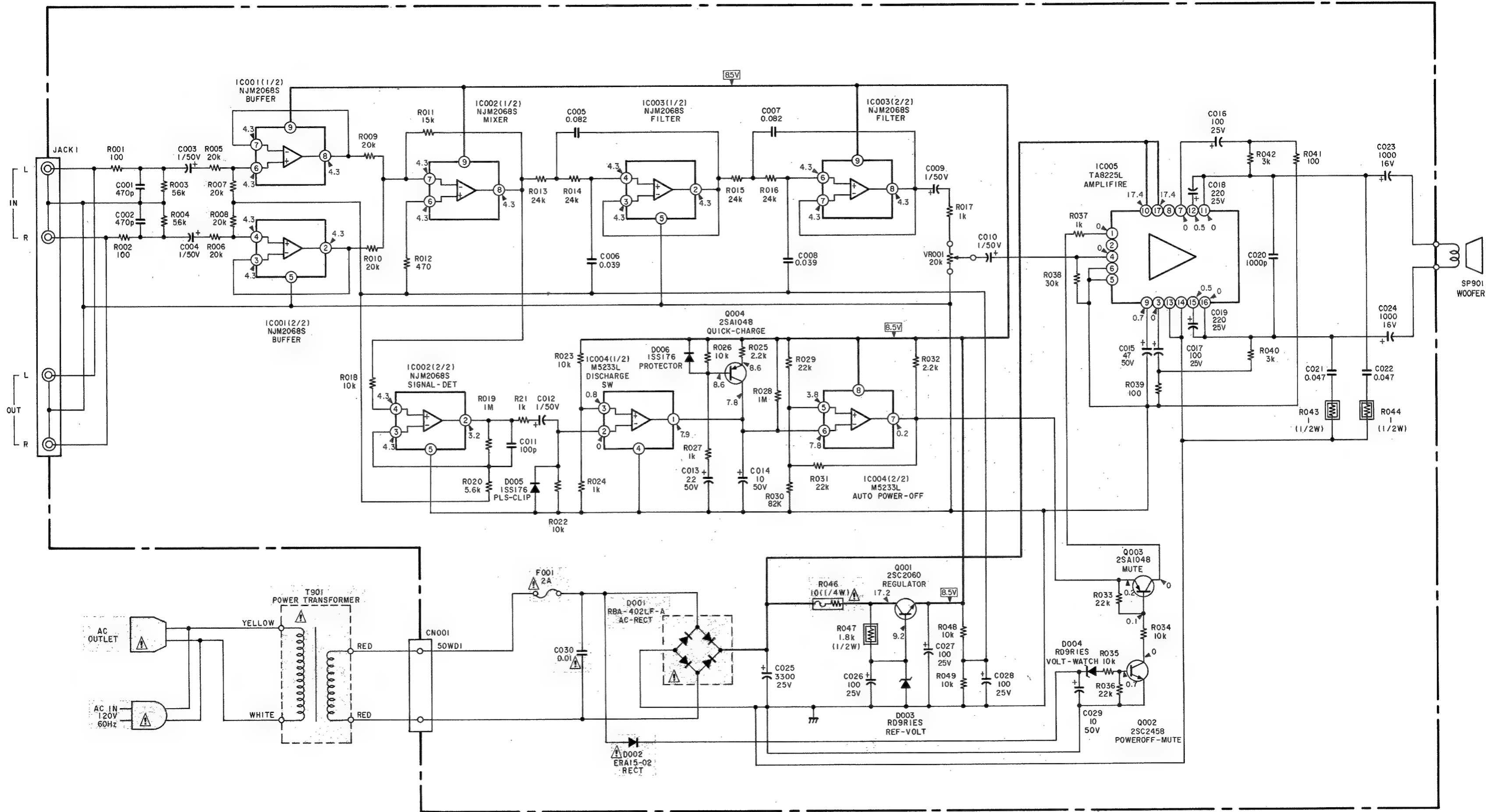
— D Board —

IC		D603	B - 13
		D605	E - 13
IC501	B - 5	D607	F - 12
IC504	D - 5	D608	A - 10
IC601	D - 10	D609	A - 10
IC602	E - 10	D610	A - 10
IC604	D - 7	D611	A - 10
IC605	B - 8	D612	B - 9
IC606	A - 7	D613	B - 9
IC610	G - 12	D614	D - 10
IC2200	I - 11	D615	C - 9
		D616	C - 9
		D617	C - 9
		D618	D - 10
		D619	D - 10
		D622	D - 11
		D623	D - 10
		D624	E - 10
		D626	D - 10
		D627	D - 9
		D628	E - 9
		D629	F - 9
		D630	F - 9
		D631	F - 8
		D632	F - 8
		D633	C - 9
		D634	C - 9
		D635	D - 9
		D636	D - 11
		D637	F - 12
		D638	F - 12
		D2201	H - 8
TRANSISTOR			
Q502	A - 2		
Q503	D - 4		
Q505	D - 5		
Q591	F - 1		
Q601	B - 12		
Q602	C - 12		
Q603	F - 12		
Q604	D - 10		
Q605	D - 9		
Q611	F - 12		
Q613	D - 9		
Q614	E - 10		
Q2202	F - 10		
Q2203	G - 10		
DIODE			
D501	F - 3		
D502	H - 5		
D503	F - 5		
D504	F - 5		
D505	G - 4		
D506	E - 2		
D507	E - 2		
D508	C - 2		
D509	D - 4		
D510	C - 1		
D511	C - 1		
D512	D - 7		
D513	A - 5		
D514	E - 6		
D515	D - 6		
D601	E - 13		
D602	D - 14		
		TEST POINT	
		TP82	E - 4
		TP84	F - 1
		TP85	I - 8
		TP90	A - 9
		TP91	D - 8
		TP92	B - 8
		TP93	A - 7
		TP94	D - 7
		TP95	E - 10
		TP96	G - 4
		TP97	F - 3
		TP98	G - 5
		TP99	F - 5



NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

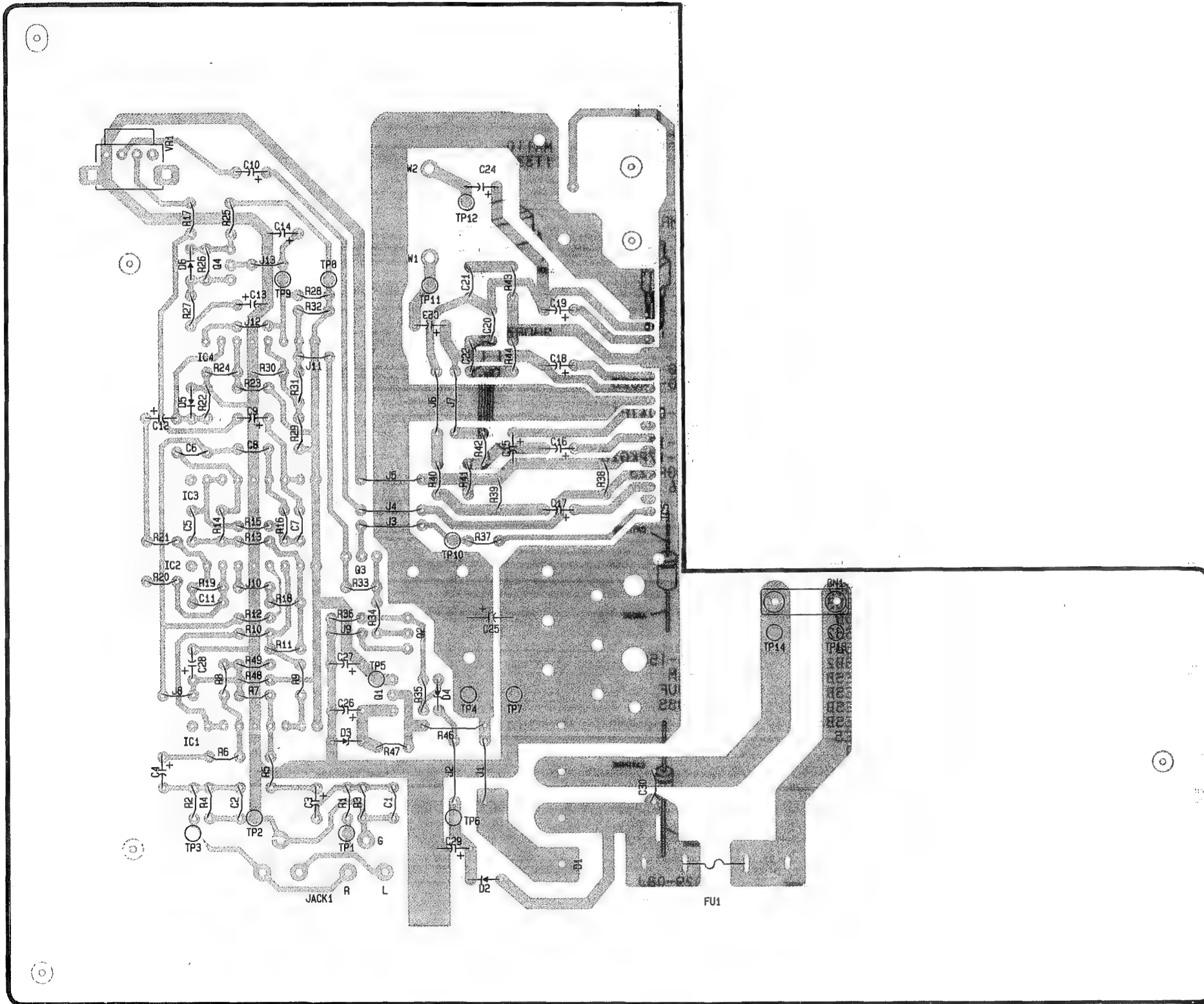


SUPER WOOFER

— SUPER WOOFER Board —

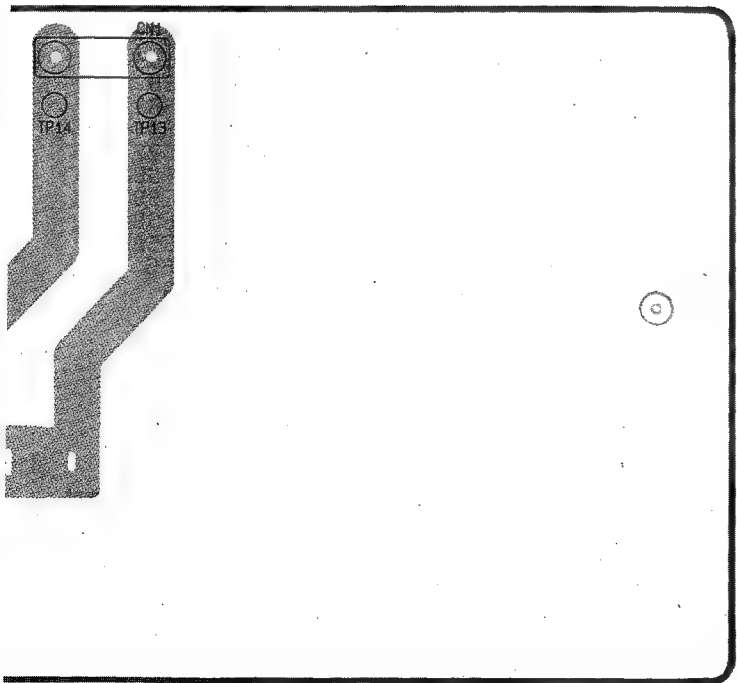
KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200



9/27TS32/27TS36
6 RM-Y117 RM-Y118
6/32TS46
8 RM-Y118
SA-W200

KV-27TS29/27TS32/27TS36
RM-Y118 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200



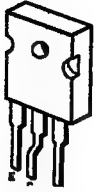
KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

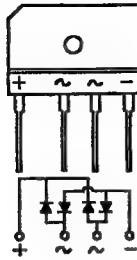
KV-32TS36/32TS46

RM-Y118 RM-Y118
SA-W200

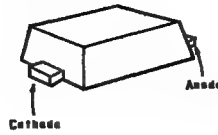
2SC3271F



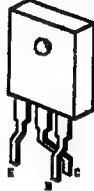
Ø4SB60L
RBA-402LF-A



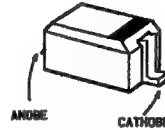
HVU359-TRU



2SC4834MNP



MA110
1T33



Ø5SC4MR



2SC4927



SHOR3Ø42

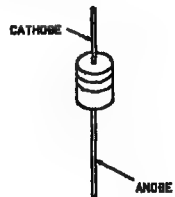
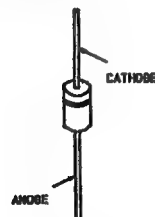


EGR20G
EGR20G-TKG23
EL1Z
ERA81-004TP1
G08Ø
RGP02-17
RGP02-17PKG23
RGP10GPK23
1SS176

Ø1NS4
Ø1N20R
ERA15-02
ERA82-004
ERA83-006
RØ10ESB
RØ10ESB2
RØ12ESB3
RØ13ESB
RØ13ESB2
RØ33ESB1
RØ33ESB2
RØ3.6ESB1
RØ5.1ESB
RØ5.1ESB1
RØ8.2ESB3
RØ9R1ES
1SS119



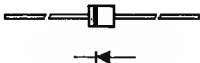
ERC06-15S
RU-3AM
S2L20UF
S3V10SS



ERØ29-Ø8J




Ø2S4MF
Ø2S4MTA1




SECTION 7 EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service
- The construction parts of an assembled part are indicated with a collation number in the remark column
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items

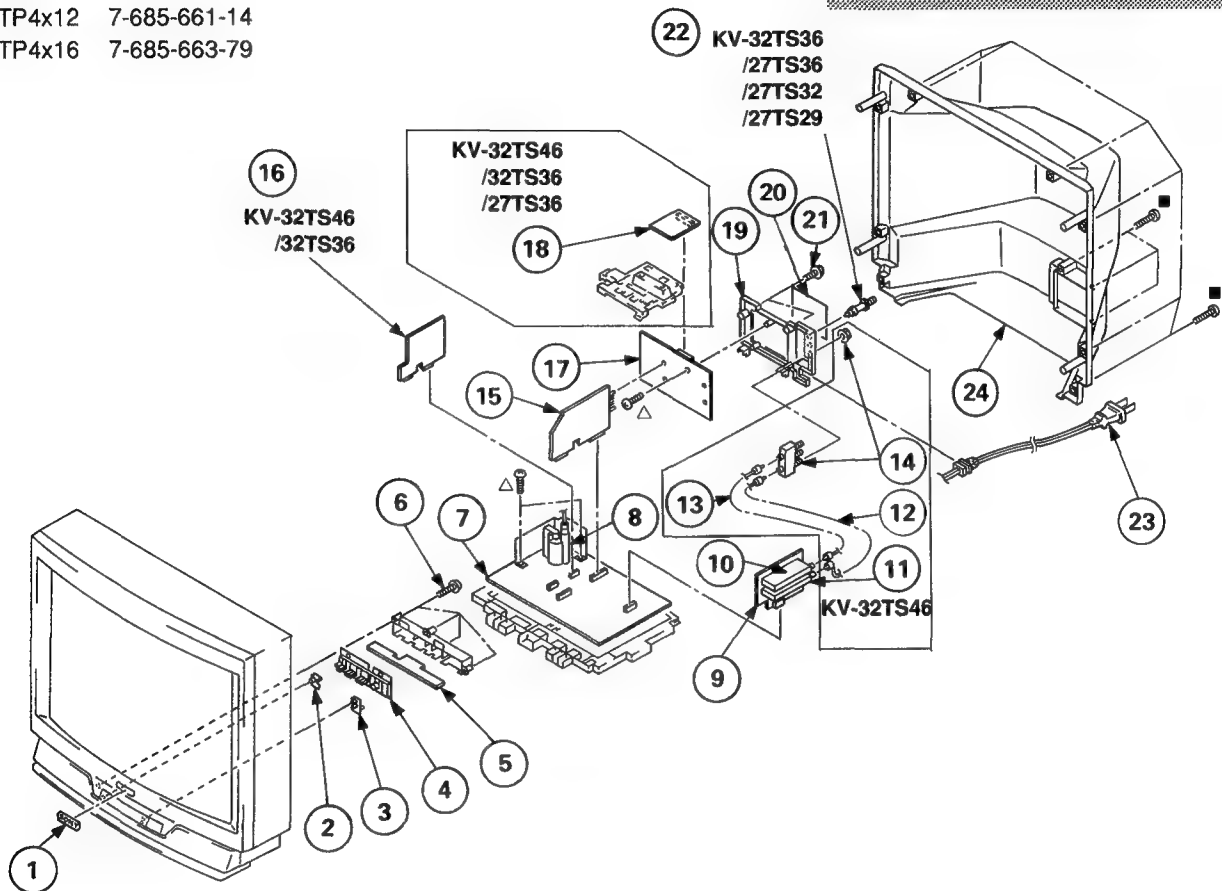
The components identified by shading and mark  are critical for safety.
Replace only with part number specified

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié

7-1. CHASSIS

△ : BVTP4x12 7-685-661-14

■ : BVTP4x16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-394-048-01	EMBLEM (NO.9), SONY		15	*A-1306-433-A	M BOARD, COMPLETE (KV-32TS46(CND))	
2	4-039-458-01	FILTER, REMOTE		15	*A-1306-434-A	M BOARD, COMPLETE (KV-32TS46(US))	
3	4-039-457-01	GUIDE, LED		16	*A-1341-622-A	E BOARD, COMPLETE (KV-32TS46/32TS36)	
4	4-039-525-01	BUTTON, MULTI		17	*A-1394-415-A	UA BOARD, COMPLETE (KV-32TS36/27TS36)	
5	*1-646-717-11	H BOARD		17	*A-1394-441-A	UA BOARD, COMPLETE (KV-27TS32)	
6	4-319-520-11	SCREW, SPECIAL (+PW4X30)		17	*A-1394-437-A	UA BOARD, COMPLETE (KV-27TS29)	
7	*A-1346-112-A	D BOARD, COMPLETE (KV-32TS46/32TS36)		17	*A-1394-435-A	UA BOARD, COMPLETE (KV-32TS46)	
7	*A-1346-129-A	D BOARD, COMPLETE (KV-27TS36/27TS32/27TS29)		18	*A-1195-062-A	P BOARD, COMPLETE (KV-32TS46/32TS36/27TS36)	
8	*1-453-146-11	TRANSFORMER ASSY. FLYBACK (KV-2694X3)		19	4-039-517-01	TERMINAL BOARD, ANTENNA (KV-32TS46)	
9	*A-1297-065-A	A BOARD, COMPLETE (KV-32TS36/27TS36/27TS32/27TS29)		19	4-039-524-01	TERMINAL BOARD, ANTENNA (KV-32TS36/27TS36/27TS32/27TS29)	
9	*A-1297-112-A	A BOARD, COMPLETE (KV-32TS46)		20	4-040-090-01	LABEL, TERMINAL (KV-27TS32)	
10	*1-8-598-039-00	TUNER 8TF-W4401		20	4-039-903-01	LABEL, TERMINAL (KV-27TS29)	
11	*1-8-598-047-00	TUNER 8TF-W4401 (KV-32TS46)		20	4-039-834-01	LABEL, TERMINAL (KV-32TS46/32TS36/27TS36)	
12	*1-751-136-11	CABLE, PIN (KV-32TS46)		21	4-382-854-11	SCREW (M3X10), P, SW (+)	
13	*1-751-135-11	CABLE, PIN (KV-32TS46)		22	1-573-657-11	PLUG, F-PIN (KV-32TS36/27TS36/27TS32/27TS29)	
14	1-417-178-11	SELECTOR, ANTENNA (AS-2) (KV-32TS46)		23	1-751-059-11	CORD, POWER (WITH CONNECTOR) (10A/120V)	
15	*A-1306-427-A	M BOARD, COMPLETE (KV-32TS36/27TS36/27TS32/27TS29(US))		24	4-039-463-01	COVER, REAR (KV-27TS36/27TS32/27TS29)	
15	*A-1306-432-A	M BOARD, COMPLETE (KV-32TS36(CND)/27TS36(CND)/27TS32/27TS29(CND))		24	4-039-634-01	COVER, REAR (KV-32TS46/32TS36)	

KV-27TS29/27TS32/27TS36

RM-Y116

RM-Y117

RM-Y118

KV-32TS36/32TS46

RM-Y118

RM-Y118

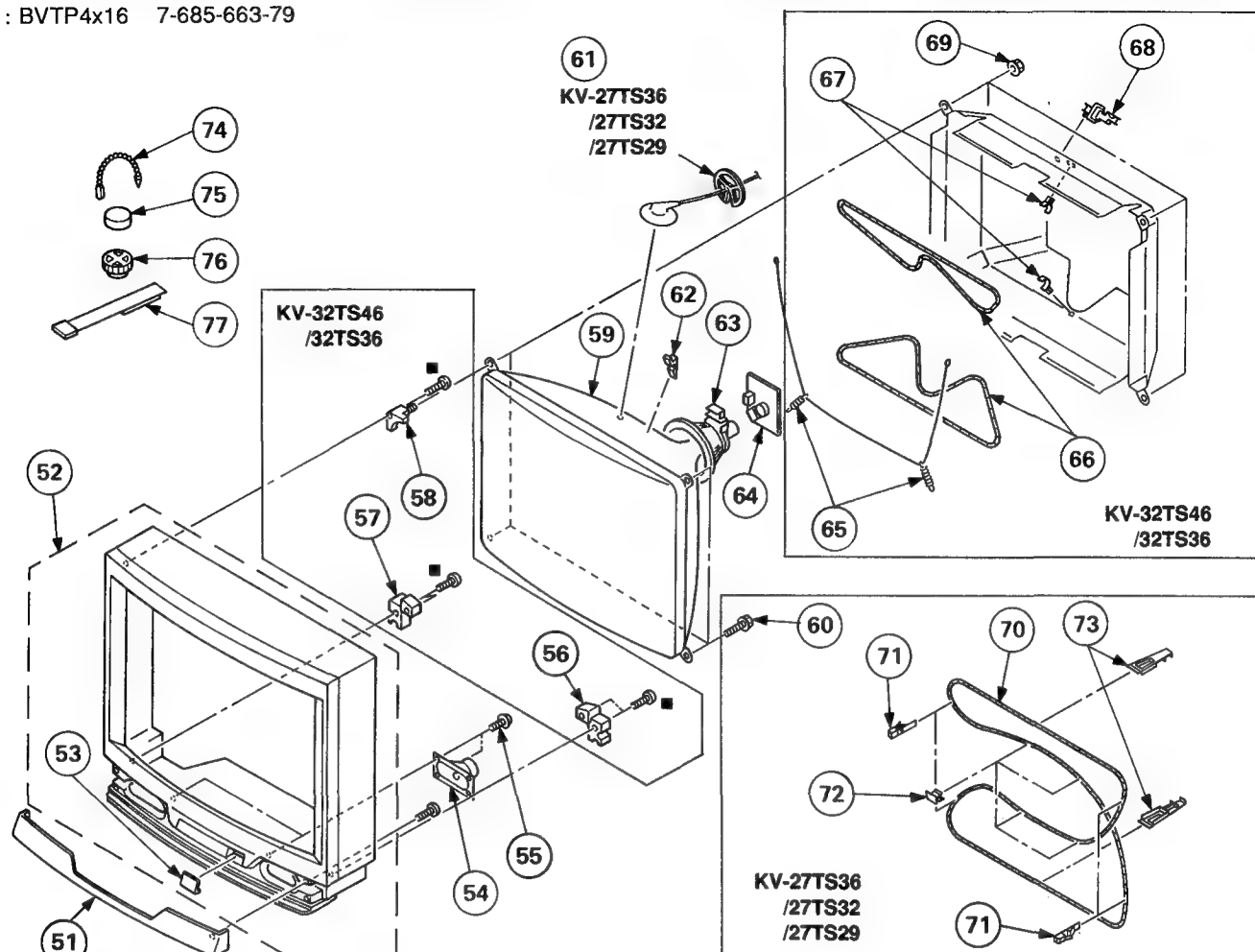
SA-W200

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark **▲** are critical for safety.
Replace only with part number specified.

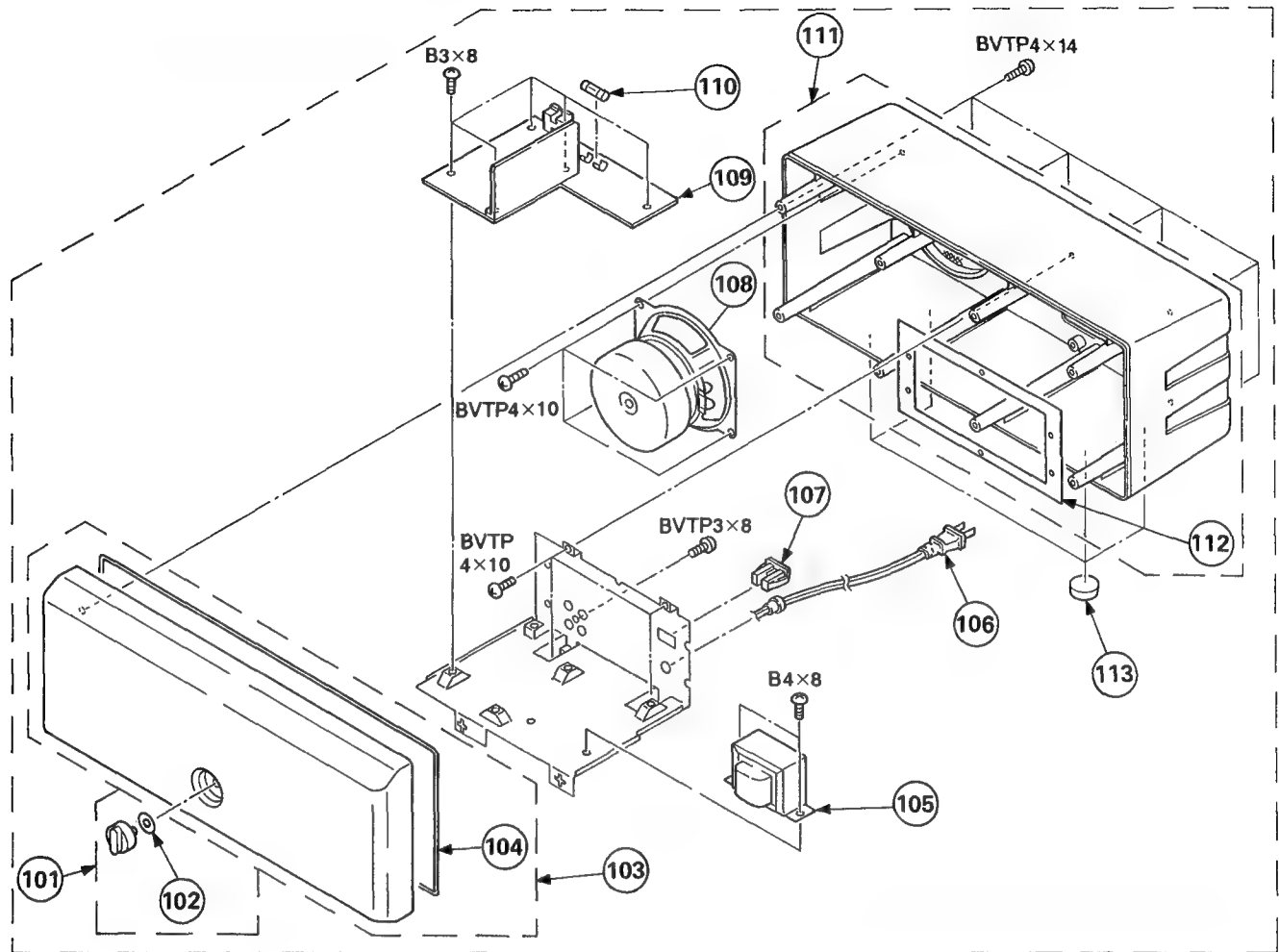
7-2. PICTURE TUBE

■ : BVTP4x16 7-685-663-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	X-4031-018-1	GRILLE ASSY, SPEAKER (KV-32TS46/32TS36)		62	3-704-495-01	SPACER, DY (KV-32TS46/32TS36)	
51	X-4031-029-1	GRILLE ASSY, SPEAKER (KV-27TS36/27TS32/27TS29)		63	▲ 1-451-315-41	DEFLECTION YOKE (Y34FXA) (KV-32TS46/32TS36)	
52	X-4031-039-1	BEZNET ASSY (KV-27TS36)	53	63	▲ 1-451-279-41	DEFLECTION YOKE (Y34FXA) (KV-27TS36/27TS32/27TS29)	
52	X-4031-038-2	BEZNET ASSY (KV-27TS32)	53	64	*A-1331-264-A	C BOARD, COMPLETE	
52	X-4031-026-1	BEZNET ASSY (KV-27TS29)	53	65	4-036-329-01	SPRING (B), TENSION (KV-27TS36/27TS32/27TS29)	
52	X-4031-019-1	BEZNET ASSY (KV-32TS36)	53	66	▲ 1-402-952-11	COIL, DEMAGNETIZATION (KV-32TS46/32TS36)	
52	X-4031-019-2	BEZNET ASSY (KV-32TS46)	53	67	*4-371-629-01	STOPPER, WIRE (KV-32TS46/32TS36)	
53	4-039-462-01	DOOR, CONTROL (KV-32TS36/27TS36)	53	68	4-033-681-01	HOLDER, LEAD (KV-32TS46/32TS36)	
53	4-039-462-11	DOOR, CONTROL (KV-27TS32)	53	69	4-387-204-01	NUT, SPECIAL, PICTURE TUBE (KV-32TS46/32TS36)	
53	4-039-459-01	PANEL (KV-27TS29)	53	70	1-406-726-11	COIL, DEGAUSSING (KV-27TS36/27TS32/27TS29)	
53	4-039-462-21	DOOR, CONTROL (KV-32TS46)	53	71	4-040-388-01	HOLDER(S), DGC (KV-27TS36/27TS32/27TS29)	
54	1-544-549-11	SPEAKER	53	72	4-040-537-01	HOLDER(A), DGC (KV-27TS36/27TS32/27TS29)	
55	4-388-477-01	SCREW(3X16), TAPPING, +BV WASHER		73	4-040-387-01	HOLDER(M), DGC (KV-27TS36/27TS32/27TS29)	
56	*4-031-428-01	SUPPORT (RIGHT) (PICTURE TUBE) (KV-32TS46/32TS36)		74	4-308-870-00	CLIP, LEAD WIRE	
57	*4-031-430-01	SUPPRT (LEFT) (PICTURE TUBE) (KV-32TS46/32TS36)		75	1-452-032-00	MAGNET, DISK	
58	4-031-429-01	BRACKET, PICTURE TUBE		76	1-452-094-00	MAGNET, ROTATABLE; 15MM ϕ	
59	▲ 8-733-723-05	PICTURE TUBE (A80JY50X) (KV-32TS46/32TS36)		77	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
59	▲ 8-733-838-05	PICTURE TUBE (A68KJ50X) (KV-27TS36/27TS32/27TS29)					
60	4-390-505-01	SCREW(7), TAPPING (KV-27TS36/27TS32/27TS29)					
61	*3-704-372-01	HOLDER, HV CABLE (KV-27TS36/27TS32/27TS29)					

7-3. SPEAKER (KV-32TS46 (US/CND))



The components identified by shading and mark **▲** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	9-904-749-01	VOLUME NOB		108	9-900-278-01	SPEAKER	
102	9-904-748-01	FELT WASHER		109	9-904-754-01	AMP KIT(TWV1019-A)	
103	9-904-745-01	FRONT CASE		110	▲ 9-904-752-01	FUSE	
104	9-904-747-01	ENCLOSURE SEALANT TUBE		111	9-904-744-01	CABINET	112
105	▲ 9-904-751-01	TRANSFORMER, POWER		112	9-904-746-01	ENCLOSURE SEALANT PACKING	
106	▲ 9-904-750-01	CORD, POWER		113	4-040-527-01	FOOT	
107	▲ 9-904-753-01	AC OUTLET					

SECTION 8

ELECTRICAL PARTS LIST

P

NOTE:

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

• All resistors are in ohms.
• F: nonflammable.

When indicating parts by reference number, please include the board name.

CAPACITORS

• MF: μ F, PF: μ F

COILS

• MMH: mH, UH: μ H

• The components identified by Δ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
*A-1195-062-A	P BOARD, COMPLETE (KV-32TS36/32TS46 /27TS36)	*****		C3249	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
<CAPACITOR>				C3250	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C3201	1-124-477-11	ELECT 47MF	20% 16V	C3251	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C3203	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C3252	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C3204	1-124-907-11	ELECT 10MF	20% 50V	C3253	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3205	1-124-907-11	ELECT 10MF	20% 50V	C3254	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3206	1-124-907-11	ELECT 10MF	20% 50V	C3255	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3207	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C3256	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C3208	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C3257	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C3209	1-123-382-00	ELECT 3.3MF	20% 50V	C3258	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C3210	1-124-477-11	ELECT 47MF	20% 16V	C3259	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C3212	1-123-382-00	ELECT 3.3MF	20% 50V	C3260	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C3213	1-164-346-11	CERAMIC CHIP 1MF	16V	C3261	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3214	1-164-346-11	CERAMIC CHIP 1MF	16V	C3263	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3215	1-164-346-11	CERAMIC CHIP 1MF	16V	C3264	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C3216	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C3265	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3217	1-164-346-11	CERAMIC CHIP 1MF	16V	C3266	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3218	1-164-346-11	CERAMIC CHIP 1MF	16V	C3267	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3219	1-126-103-11	ELECT 470MF	20% 16V	C3268	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3220	1-164-346-11	CERAMIC CHIP 1MF	16V	C3269	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3221	1-164-346-11	CERAMIC CHIP 1MF	16V	C3270	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C3222	1-164-336-11	CERAMIC CHIP 0.33MF	25V	C3271	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C3223	1-164-336-11	CERAMIC CHIP 0.33MF	25V	C3272	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C3224	1-164-222-11	CERAMIC CHIP 0.22MF	25V	C3273	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C3225	1-164-222-11	CERAMIC CHIP 0.22MF	25V	C3274	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3226	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C3275	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3227	1-164-346-11	CERAMIC CHIP 1MF	16V	C3276	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C3228	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C3277	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3229	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C3278	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C3230	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C3279	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C3231	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C3280	1-124-907-11	ELECT 10MF	20% 50V
C3232	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C3282	1-164-346-11	CERAMIC CHIP 1MF	16V
C3233	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	<CONNECTOR>			
C3234	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	CN150	1-573-297-11	CONNECTOR, BOARD TO BOARD 18P	
C3235	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	<DIODE>			
C3236	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D3202	8-719-031-68	DIODE HVU359-TRU	
C3237	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D3203	8-719-404-46	DIODE MA110	
C3238	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	D3208	8-719-110-17	DIODE RD10ESB2	
C3239	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	D3209	8-719-110-17	DIODE RD10ESB2	
C3240	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	<IC>			
C3241	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	IC3200	8-759-517-74	IC MB81461-12-PSZ-G-BF2	
C3242	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC3201	8-759-093-29	IC MB86144	
C3243	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	IC3202	8-759-093-28	IC MB40176PF-EF	
C3244	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	IC3203	8-759-093-28	IC MB40176PF-EF	
C3245	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	IC3204	8-759-093-26	IC MB3512PF-EF	
C3246	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V				
C3247	1-163-033-00	CERAMIC CHIP 0.022MF	50V				
C3248	1-163-125-00	CERAMIC CHIP 220PF	5% 50V				

P A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
IC3205	8-759-243-19	IC TC7SU04F		R3238	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	<COIL>			R3239	1-216-043-00	METAL GLAZE 560 5%	1/10W
L3201	1-410-470-11	INDUCTOR 10UH		R3241	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
L3202	1-408-424-00	INDUCTOR 180UH		R3242	1-216-049-00	METAL GLAZE 1K 5%	1/10W
L3203	1-408-424-00	INDUCTOR 180UH		R3243	1-216-025-00	METAL GLAZE 100 5%	1/10W
L3204	1-410-476-11	INDUCTOR 33UH		R3244	1-216-025-00	METAL GLAZE 100 5%	1/10W
L3205	1-410-470-11	INDUCTOR 10UH		R3245	1-216-025-00	METAL GLAZE 100 5%	1/10W
L3206	1-410-387-11	INDUCTOR 33UH		R3246	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
L3207	1-410-387-11	INDUCTOR 33UH		R3247	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
L3208	1-410-387-11	INDUCTOR 33UH		R3248	1-216-295-00	METAL GLAZE 0 5%	1/10W
L3209	1-410-387-11	INDUCTOR 33UH		R3249	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
	<TRANSISTOR>			R3250	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q3201	8-729-422-36	TRANSISTOR 2SB709A-Q		R3251	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q3202	8-729-422-27	TRANSISTOR 2SD601A-Q		R3252	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q3203	8-729-422-36	TRANSISTOR 2SB709A-Q		R3253	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
Q3204	8-729-422-36	TRANSISTOR 2SB709A-Q		R3254	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q3206	8-729-422-27	TRANSISTOR 2SD601A-Q		R3255	1-216-041-00	METAL GLAZE 470 5%	1/10W
Q3207	8-729-422-36	TRANSISTOR 2SB709A-Q		R3256	1-216-043-00	METAL GLAZE 560 5%	1/10W
Q3208	8-729-422-27	TRANSISTOR 2SD601A-Q		R3259	1-216-298-00	METAL GLAZE 2.2 5%	1/10W
Q3209	8-729-422-36	TRANSISTOR 2SB709A-Q		R3260	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q3210	8-729-422-36	TRANSISTOR 2SB709A-Q		R3263	1-216-025-00	METAL GLAZE 100 5%	1/10W
	<RESISTOR>			R3264	1-216-025-00	METAL GLAZE 100 5%	1/10W
R3201	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R3265	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3202	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R3266	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R3203	1-216-025-00	METAL GLAZE 100 5%	1/10W	R3267	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R3204	1-216-025-00	METAL GLAZE 100 5%	1/10W	R3268	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R3205	1-216-121-00	METAL GLAZE 1M 5%	1/10W	R3269	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R3207	1-216-295-00	METAL GLAZE 0 5%	1/10W	R3270	1-216-657-11	METAL CHIP 1.8K 0.50%	1/10W
R3208	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R3271	1-216-655-11	METAL CHIP 1.5K 0.50%	1/10W
R3209	1-216-079-00	METAL GLAZE 18K 5%	1/10W	R3273	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R3210	1-216-089-00	METAL GLAZE 47K 5%	1/10W	R3274	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3211	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R3275	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3212	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R3276	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R3213	1-216-075-00	METAL GLAZE 12K 5%	1/10W	R3277	1-216-298-00	METAL GLAZE 2 2 5%	1/10W
R3214	1-216-121-00	METAL GLAZE 1M 5%	1/10W		<CRYSTAL>		
R3215	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	X3201	1-567-878-11	VIBRATOR, CRYSTAL	
R3216	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	X3202	1-567-878-11	VIBRATOR, CRYSTAL	
R3217	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		*****		
R3218	1-216-049-00	METAL GLAZE 1K 5%	1/10W	*A-1297-065-A	A BOARD, COMPLETE (KV-32TS36/27TS36/27TS32/27TS29)		
R3219	1-216-049-00	METAL GLAZE 1K 5%	1/10W	*A-1297-112-A	A BOARD, COMPLETE (KV-32TS46)		
R3220	1-216-049-00	METAL GLAZE 1K 5%	1/10W		*****		
R3221	1-216-655-11	METAL CHIP 1.5K 0.50%	1/10W		<CAPACITOR>		
R3222	1-216-655-11	METAL CHIP 1.5K 0.50%	1/10W	C171	1-124-907-11	ELECT 10MF	20% 50V
R3223	1-216-025-00	METAL GLAZE 100 5%	1/10W				(KV-32TS46)
R3224	1-216-049-00	METAL GLAZE 1K 5%	1/10W	C173	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
R3225	1-216-025-00	METAL GLAZE 100 5%	1/10W	C174	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
R3226	1-216-085-00	METAL GLAZE 33K 5%	1/10W	C175	1-126-103-11	ELECT 470MF	20% 16V
R3227	1-216-647-11	METAL CHIP 680 0.50%	1/10W	C176	1-126-103-11	ELECT 470MF	20% 16V
R3228	1-216-045-00	METAL GLAZE 680 5%	1/10W	C177	1-124-907-11	ELECT 10MF	20% 50V
R3229	1-216-073-00	METAL GLAZE 10K 5%	1/10W	C178	1-126-101-11	ELECT 100MF	20% 16V
R3230	1-216-073-00	METAL GLAZE 10K 5%	1/10W	C179	1-124-916-11	ELECT 22MF	20% 25V
R3231	1-216-001-00	METAL GLAZE 10 5%	1/10W	C180	1-124-916-11	ELECT 22MF	20% 25V
R3232	1-216-083-00	METAL GLAZE 27K 5%	1/10W				(KV-32TS46)
R3233	1-216-049-00	METAL GLAZE 1K 5%	1/10W	C181	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
R3234	1-216-651-11	METAL CHIP 1K 0.50%	1/10W	C182	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
R3235	1-216-043-00	METAL GLAZE 560 5%	1/10W				(KV-32TS46)
R3236	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	C184	1-124-907-11	ELECT 10MF	20% 50V
R3237	1-216-043-00	METAL GLAZE 560 5%	1/10W				(KV-32TS46)

KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46

RM-Y118 RM-Y118
SA-W200

A M

Les composants identifiés par une
trame et une marque Δ sont
critiques pour la sécurité
Ne les remplacer que par une pièce
portant le numéro spécifié

The components identified by
shading and mark Δ are critical
for safety
Replace only with part number
specified

REF.NO. PART NO. DESCRIPTION REMARK

<CONNECTOR>

CN103 *1-564-519-11 PLUG, CONNECTOR 4P
CN151 *1-573-979-11 CONNECTOR, BOARD TO BOARD 11P
CN152 1-750-394-11 PIN, CONNECTOR (STAKING) 32P
CN164 *1-564-505-11 PLUG, CONNECTOR 2P
CN165 *1-564-505-11 PLUG, CONNECTOR 2P

<DIODE>

D170 8-719-110-78 DIODE RD33ESB2
D175 8-719-110-76 DIODE RD33ESB1 (KV-32TS46)

<IC>

IC172 8-759-932-67 IC BU4053BF (KV-32TS46)

<COIL>

L170 1-408-408-00 INDUCTOR 8.2UH
L171 1-408-408-00 INDUCTOR 8.2UH
L172 1-408-408-00 INDUCTOR 8.2UH
L173 1-408-408-00 INDUCTOR 8.2UH (KV-32TS46)

<TRANSISTOR>

Q172 8-729-422-36 TRANSISTOR 2SB709A-Q (KV-32TS46)
Q173 8-729-422-36 TRANSISTOR 2SB709A-Q (KV-32TS46)

<RESISTOR>

R170 1-216-025-00 METAL GLAZE 100 5% 1/10W
(KV-32TS36/27TS36/27TS32/27TS29)
R173 1-216-295-00 METAL GLAZE 0 5% 1/10W
(KV-32TS46)
R174 1-216-689-11 METAL GLAZE 39K 5% 1/10W
R175 1-215-900-11 METAL OXIDE 22K 5% 2W F
(KV-32TS46)
R176 1-216-295-00 METAL GLAZE 0 5% 1/10W
(KV-32TS36/27TS36/27TS32/27TS29)
R177 1-215-900-11 METAL OXIDE 22K 5% 2W F
R179 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W
R181 1-216-025-00 METAL GLAZE 100 5% 1/10W
(KV-32TS46)
R185 1-216-025-00 METAL GLAZE 100 5% 1/10W
(KV-32TS46)
R187 1-216-083-00 METAL GLAZE 27K 5% 1/10W
R188 1-216-689-11 METAL GLAZE 39K 5% 1/10W
(KV-32TS46)
R189 1-216-083-00 METAL GLAZE 27K 5% 1/10W
(KV-32TS46)
R190 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W
(KV-32TS46)
R191 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W
(KV-32TS46)
R193 1-216-037-00 METAL GLAZE 330 5% 1/10W
R196 1-216-037-00 METAL GLAZE 330 5% 1/10W
(KV-32TS46)

<TUNER>

TU101A 8-598-039-00 TUNER 3TF-WA401
TU102A 8-598-047-00 TUNER 3TF-WA401 (KV-32TS46)

REF.NO. PART NO. DESCRIPTION REMARK

*A-1306-427-A M BOARD, COMPLETE

(KV-32TS36(US)/27TS36(US)/27TS32/27TS29(US))

*A-1306-432-A M BOARD, COMPLETE

(KV-32TS36(CND)/27TS36(CND)/27TS29(CND))

*A-1306-433-A M BOARD, COMPLETE (KV-32TS46(CND))

*A-1306-434-A M BOARD, COMPLETE (KV-32TS46(US))

<CAPACITOR>

C002 1-163-809-11 CERAMIC CHIP 0.047MF 10% 25V
C003 1-163-001-11 CERAMIC CHIP 220PF 10% 50V
C005 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C006 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C007 1-124-903-11 ELECT 1MF 20% 50V

C008 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C009 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C010 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C012 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C013 1-163-125-00 CERAMIC CHIP 220PF 5% 50V

C014 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C015 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C016 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C017 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C018 1-163-125-00 CERAMIC CHIP 220PF 5% 50V

C019 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C021 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C022 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C023 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C025 1-163-125-00 CERAMIC CHIP 220PF 5% 50V

C028 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C029 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C034 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
(KV-32TS46)

C035 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
(KV-32TS46)

C041 1-163-009-11 CERAMIC CHIP 0.001MF 10% 50V
C043 1-163-159-00 CERAMIC CHIP 12PF 2% 50V
C045 1-124-119-00 ELECT 330MF 20% 16V
C047 1-104-896-91 CERAMIC CHIP 24PF 2% 50V
C049 1-163-125-00 CERAMIC CHIP 220PF 5% 50V

C050 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C051 1-163-031-11 CERAMIC CHIP 0.01MF 5% 50V
C052 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C053 1-163-121-00 CERAMIC CHIP 150PF 5% 50V
C054 1-163-125-00 CERAMIC CHIP 220PF 5% 50V

C055 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C056 1-163-125-00 CERAMIC CHIP 220PF 5% 50V
C057 1-163-017-00 CERAMIC CHIP 0.0047MF 10% 50V
C058 1-163-037-11 CERAMIC CHIP 0.022MF 10% 25V
C059 1-163-125-00 CERAMIC CHIP 220PF 5% 50V

C060 1-124-903-11 ELECT 1MF 20% 50V
C061 1-163-117-00 CERAMIC CHIP 100PF 5% 50V
C062 1-124-907-11 ELECT 10MF 20% 50V

C150 1-136-165-00 FILM 0.1MF 5% 50V
(KV-32TS46(US)/32TS36(US))

C151 1-136-175-00 FILM 0.068MF 5% 50V
(KV-32TS46(US)/32TS36(US))

M

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C152	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US)/32TS36(US))	<CONNECTOR>			
C153	1-137-367-11	FILM	0.0033MF 5% 50V (KV-32TS46(US)/32TS36(US))	CN129	*1-564-523-11	PLUG, CONNECTOR 8P	
C154	1-163-038-00	CERAMIC CHIP	0.1MF 25V (KV-32TS46(US)/32TS36(US))	CN130	1-573-301-11	CONNECTOR, BOARD TO BOARD 20P	
C155	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US)/32TS36(US))	CN131	*1-691-632-11	CONNECTOR, BOARD TO BOARD 15P	
C156	1-163-135-00	CERAMIC CHIP	560PF 5% 50V (KV-32TS46(US)/32TS36(US))	CN134	*1-564-521-11	PLUG, CONNECTOR 6P (KV-32TS46)	
C157	1-163-038-00	CERAMIC CHIP	0.1MF 25V (KV-32TS46(US)/32TS36(US))	CN137	1-750-394-11	PIN, CONNECTOR (STAKING) 32P	
C158	1-124-903-11	ELECT	1MF 20% 50V (KV-32TS46(US)/32TS36(US))	CN138	*1-564-511-31	PLUG, CONNECTOR 8P	
C160	1-124-903-11	ELECT	1MF 20% 50V	CN168	*1-564-505-11	PLUG, CONNECTOR 2P	
C201	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V	<DIODE>			
C202	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	D001	8-719-404-46	DIODE MA110	
C203	1-163-989-11	CERAMIC CHIP	0.033MF 10% 25V	D002	8-719-404-46	DIODE MA110	
C204	1-126-101-11	ELECT	100MF 20% 16V	D004	8-719-404-46	DIODE MA110 (KV-32TS46(US))	
C205	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	D005	8-713-300-57	DIODE 1T33	
C211	1-163-989-11	CERAMIC CHIP	0.033MF 10% 25V	D006	8-719-110-17	DIODE RD10ESB2	
C212	1-124-902-00	ELECT	0.47MF 20% 50V	D007	8-719-110-17	DIODE RD10ESB2	
C213	1-124-902-00	ELECT	0.47MF 20% 50V	D008	8-719-110-17	DIODE RD10ESB2	
C214	1-163-017-00	CERAMIC CHIP	0.0047MF 10% 50V	D009	8-719-110-17	DIODE RD10ESB2	
C216	1-124-478-11	ELECT	100MF 20% 25V	D150	8-719-404-46	DIODE MA110 (KV-32TS46(US)/32TS36(US))	
C301	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	D201	8-719-404-46	DIODE MA110	
C305	1-124-907-11	ELECT	10MF 20% 50V	D202	8-719-404-46	DIODE MA110	
C306	1-124-902-00	ELECT	0.47MF 20% 50V	D205	8-719-110-17	DIODE RD10ESB2	
C307	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	D206	8-719-110-17	DIODE RD10ESB2	
C308	1-163-099-00	CERAMIC CHIP	18PF 5% 50V	D301	8-719-110-17	DIODE RD10ESB2	
C310	1-124-916-11	ELECT	22MF 20% 25V	D304	8-719-110-17	DIODE RD10ESB2	
C311	1-124-903-11	ELECT	1MF 20% 50V	<IC>			
C313	1-163-003-11	CERAMIC CHIP	330PF 10% 50V	IC101	8-752-841-16	IC CXP80424-SV4397	
C315	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US))	IC102	8-759-057-38	IC 24C02AI/P	
C316	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US))	IC150	8-759-084-09	IC Z8612812PSC (KV-32TS46(US)/32TS36(US))	
C317	1-124-907-11	ELECT	10MF 20% 50V (KV-32TS46(US))	IC201	8-759-090-21	IC TDA8424	
C318	1-136-165-00	FILM	0.1MF 5% 50V	IC202	8-759-983-69	IC UPC358PS	
C319	1-136-165-00	FILM	0.1MF 5% 50V	IC301	8-752-059-67	IC CXA1465AS	
C320	1-136-165-00	FILM	0.1MF 5% 50V	<JUMPER RESISTOR>			
C321	1-124-360-00	ELECT	1000MF 20% 16V	JR200	1-216-295-00	METAL GLAZE 0 5% 1/10W	
C322	1-136-153-00	FILM	0.01MF 5% 50V	<COIL>			
C323	1-126-176-11	ELECT	220MF 20% 10V	L001	1-410-470-11	INDUCTOR 10UH	
C324	1-163-003-11	CERAMIC CHIP	330PF 10% 50V	L002	1-408-414-00	INDUCTOR 27UH	
C325	1-163-037-11	CERAMIC CHIP	0.022MF 10% 25V	L150	1-410-470-11	INDUCTOR 10UH (KV-32TS46(US)/32TS36(US))	
C326	1-136-169-00	FILM	0.22MF 5% 50V	<TRANSISTOR>			
C327	1-136-169-00	FILM	0.22MF 5% 50V	Q001	8-729-422-36	TRANSISTOR 2SB709A-Q	
C328	1-124-902-00	ELECT	0.47MF 20% 50V	Q002	8-729-422-36	TRANSISTOR 2SB709A-Q	
C329	1-124-903-11	ELECT	1MF 20% 50V	Q004	8-729-422-36	TRANSISTOR 2SB709A-Q	
C330	1-124-907-11	ELECT	10MF 20% 50V	Q005	8-729-422-27	TRANSISTOR 2SD601A-Q	
C331	1-124-907-11	ELECT	10MF 20% 50V	Q151	8-729-422-27	TRANSISTOR 2SD601A-Q (KV-32TS46(US)/32TS36(US))	
C332	1-164-489-11	CERAMIC CHIP	0.22MF 10% 16V	Q201	8-729-422-27	TRANSISTOR 2SD601A-Q	
C333	1-163-011-11	CERAMIC CHIP	0.0015MF 10% 50V	Q301	8-729-422-36	TRANSISTOR 2SB709A-Q	
C334	1-124-902-00	ELECT	0.47MF 20% 50V	Q302	8-729-422-36	TRANSISTOR 2SB709A-Q	
C335	1-163-001-11	CERAMIC CHIP	220PF 10% 50V	Q307	8-729-422-27	TRANSISTOR 2SD601A-Q	
C336	1-124-903-11	ELECT	1MF 20% 50V	Q308	8-729-422-27	TRANSISTOR 2SD601A-Q	
C337	1-124-902-00	ELECT	0.47MF 20% 50V				
C338	1-136-153-00	FILM	0.01MF 5% 50V				
C340	1-124-903-11	ELECT	1MF 20% 50V				
C341	1-163-005-11	CERAMIC CHIP	470PF 10% 50V				
C342	1-137-414-91	FILM	0.0047MF 10% 100V				

KV-27TS29/27TS32/27TS36

RM-Y116

RM-Y117

RM-Y118

KV-32TS36/32TS46

RM-Y116

RM-Y118

SA-W200

M

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<RESISTOR>				R074	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R002	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R075	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R003	1-216-033-00	METAL GLAZE 220 5% 1/10W		R076	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R004	1-216-033-00	METAL GLAZE 220 5% 1/10W		R078	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R005	1-216-033-00	METAL GLAZE 220 5% 1/10W		R079	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R006	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R080	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R007	1-216-033-00	METAL GLAZE 220 5% 1/10W		R082	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R008	1-216-033-00	METAL GLAZE 220 5% 1/10W		R083	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R009	1-216-033-00	METAL GLAZE 220 5% 1/10W		R086	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R011	1-216-033-00	METAL GLAZE 220 5% 1/10W		R087	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R012	1-216-033-00	METAL GLAZE 220 5% 1/10W		R089	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R013	1-216-033-00	METAL GLAZE 220 5% 1/10W		R090	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R016	1-216-033-00	METAL GLAZE 220 5% 1/10W		R091	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R017	1-216-033-00	METAL GLAZE 220 5% 1/10W		R092	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R018	1-216-033-00	METAL GLAZE 220 5% 1/10W		R093	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R019	1-216-033-00	METAL GLAZE 220 5% 1/10W		R150	1-216-097-00	METAL GLAZE 100K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R020	1-216-033-00	METAL GLAZE 220 5% 1/10W		R151	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R021	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R152	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R022	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R153	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R023	1-216-033-00	METAL GLAZE 220 5% 1/10W		R154	1-216-041-00	METAL GLAZE 470 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R025	1-216-033-00	METAL GLAZE 220 5% 1/10W		R155	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R026	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R156	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R027	1-216-121-00	METAL GLAZE 1K 5% 1/10W		R157	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R028	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R158	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R029	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R159	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R030	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R160	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R031	1-216-033-00	METAL GLAZE 220 5% 1/10W		R161	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R032	1-216-033-00	METAL GLAZE 220 5% 1/10W		R162	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R033	1-216-033-00	METAL GLAZE 220 5% 1/10W		R163	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R034	1-216-033-00	METAL GLAZE 220 5% 1/10W		R164	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R035	1-216-033-00	METAL GLAZE 220 5% 1/10W		R165	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R036	1-216-033-00	METAL GLAZE 220 5% 1/10W		R166	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R037	1-216-033-00	METAL GLAZE 220 5% 1/10W		R168	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46(US)/32TS36(US))	
R038	1-216-033-00	METAL GLAZE 220 5% 1/10W		R201	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R039	1-216-295-00	METAL GLAZE 0 5% 1/10W		R202	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R040	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R203	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R041	1-216-033-00	METAL GLAZE 220 5% 1/10W		R204	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R042	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R205	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R043	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R206	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R044	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R207	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R045	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R208	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R046	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R209	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R047	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R210	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R048	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R211	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R049	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R212	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R050	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R213	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R051	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R218	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R052	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R053	1-216-049-00	METAL GLAZE 1K 5% 1/10W					
R054	1-216-049-00	METAL GLAZE 1K 5% 1/10W					
R055	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-32TS46)					
R058	1-216-073-00	METAL GLAZE 10K 5% 1/10W					
R059	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R061	1-216-077-00	METAL GLAZE 15K 5% 1/10W					
R062	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W					
R063	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-32TS46)					
R064	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R065	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R066	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R067	1-216-025-00	METAL GLAZE 100 5% 1/10W					
R069	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-32TS46)					

M C

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R219	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R220	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R222	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R223	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R301	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R302	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R303	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R306	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R312	1-216-119-00	METAL GLAZE 820K 5% 1/10W	
R313	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R321	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R323	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R324	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R327	1-216-653-11	METAL CHIP 1.2K 0.50% 1/10W	
R328	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R329	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R330	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R331	1-216-678-11	METAL CHIP 13K 0.50% 1/10W	
R332	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R333	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R334	1-216-687-11	METAL CHIP 33K 0.50% 1/10W	
R335	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R336	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R337	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R338	1-249-417-11	CARBON 1K 5% 1/4W F	
R339	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R340	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R341	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R342	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R343	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R344	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R345	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R346	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R347	1-249-409-91	CARBON 220 5% 1/4W F	
R348	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R349	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R350	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R351	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R352	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R353	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R354	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R356	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R374	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R375	1-216-033-00	METAL GLAZE 220 5% 1/10W	

<CRYSTAL>

X001	1-579-917-21	VIBRATOR, CRYSTAL
X001	1-579-917-41	VIBRATOR, CRYSTAL
X301	1-567-505-11	OSCILLATOR, CRYSTAL

*A-1331-264-A C BOARD, COMPLETE

<CAPACITOR>

C700	1-102-074-00	CERAMIC 0.001MF 10% 50V
C701	1-162-114-00	CERAMIC 0.0047MF 2KV
C702	1-106-375-12	MYLAR 0.022MF 99% 200V
C703	1-106-375-12	MYLAR 0.022MF 99% 200V
C704	1-162-116-00	CERAMIC 680PF 10% 2KV
C705	1-123-946-00	ELECT 4.7MF 20% 250V
C706	1-126-101-11	ELECT 100MF 20% 16V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C707	1-102-129-00	CERAMIC 0.01MF 10% 50V	
C711	1-164-083-11	CERAMIC 680PF 10% 50V	
C712	1-164-081-11	CERAMIC 470PF 10% 50V	
C731	1-164-083-11	CERAMIC 680PF 10% 50V	
C732	1-164-081-11	CERAMIC 470PF 10% 50V	
C751	1-164-083-11	CERAMIC 680PF 10% 50V	
C752	1-164-083-11	CERAMIC 680PF 10% 50V	

<CONNECTOR>

CN701	1-695-915-11	TAB (CONTACT)
CN702	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P
CN703	*1-564-511-11	PLUG, CONNECTOR 8P

<DIODE>

D711	8-719-911-19	DIODE 1SS119
D712	8-719-911-19	DIODE 1SS119
D731	8-719-911-19	DIODE 1SS119
D732	8-719-911-19	DIODE 1SS119
D751	8-719-911-19	DIODE 1SS119
D752	8-719-911-19	DIODE 1SS119
D770	8-719-911-19	DIODE 1SS119
D771	8-719-911-19	DIODE 1SS119
D772	8-719-911-19	DIODE 1SS119
D773	8-719-911-19	DIODE 1SS119
D777	8-719-109-68	DIODE RD3.6ESB1
D790	8-719-911-19	DIODE 1SS119
D791	8-719-911-19	DIODE 1SS119
D792	8-719-911-19	DIODE 1SS119
D793	8-719-911-19	DIODE 1SS119
D794	8-719-911-19	DIODE 1SS119
D795	8-719-911-19	DIODE 1SS119

<SOCKET>

J701	1-540-071-13	SOCKET, PICTURE TUBE
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<COIL>

L701	1-410-478-11	INDUCTOR 47UH
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<TRANSISTOR>

Q711	8-729-926-73	TRANSISTOR 2SC3271-N
Q712	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q731	8-729-926-73	TRANSISTOR 2SC3271-N
Q732	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q751	8-729-926-73	TRANSISTOR 2SC3271-N
Q752	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q770	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q771	8-729-200-17	TRANSISTOR 2SA1071-O
Q772	8-729-200-17	TRANSISTOR 2SA1071-O
Q773	8-729-200-17	TRANSISTOR 2SA1071-O
Q790	8-729-119-78	TRANSISTOR 2SC2785-HFE

<RESISTOR>

R700	1-247-739-11	CARBON 100 5% 1/2W
R701	1-244-941-00	CARBON 680K 5% 1/2W
R702	1-249-496-11	CARBON 100K 5% 1/2W
R703	1-249-496-11	CARBON 100K 5% 1/2W
R704	1-216-398-11	METAL OXIDE 5.6 5% 3W F

KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46

RM-Y118 RM-Y118
SA-W200

Les composants identifiés par une
trame et une marque Δ sont
critiques pour la sécurité
Ne les remplacer que par une pièce
portant le numéro spécifié

The components identified by
shading and mark Δ are critical
for safety
Replace only with part number
specified

C E

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R705	1-216-398-11	METAL OXIDE	5.6 5% 3W F	C1532	1-124-477-11	ELECT 47MF 20% 16V	
R706	1-214-921-00	CARBON	220K 5% 1/2W	C1533	1-124-916-11	ELECT 22MF 20% 25V	
R710	1-247-758-11	CARBON	3.3K 5% 1/2W	C1542	1-124-477-11	ELECT 47MF 20% 16V	
R711	1-249-405-11	CARBON	100 5% 1/4W	C1550	1-136-756-11	FILM 0.24MF 5% 200V	
R712	1-215-924-00	METAL OXIDE	15K 5% 3W F				
R714	1-249-425-11	CARBON	4.7K 5% 1/4W				
R716	1-249-417-11	CARBON	1K 5% 1/4W				
R717	1-249-393-11	CARBON	10 5% 1/4W				
R718	1-249-413-11	CARBON	470 5% 1/4W				
R730	1-247-758-11	CARBON	3.3K 5% 1/2W				
R731	1-249-405-11	CARBON	100 5% 1/4W				
R732	1-215-924-00	METAL OXIDE	15K 5% 3W F				
R734	1-249-425-11	CARBON	4.7K 5% 1/4W				
R736	1-249-411-11	CARBON	330 5% 1/4W				
R737	1-249-393-11	CARBON	10 5% 1/4W				
R750	1-247-758-11	CARBON	3.3K 5% 1/2W				
R751	1-249-405-11	CARBON	100 5% 1/4W				
R752	1-215-924-00	METAL OXIDE	15K 5% 3W F				
R754	1-249-425-11	CARBON	4.7K 5% 1/4W				
R756	1-249-411-11	CARBON	330 5% 1/4W				
R757	1-249-393-11	CARBON	10 5% 1/4W				
R770	1-249-433-11	CARBON	22K 5% 1/4W				
R771	1-249-409-91	CARBON	220 5% 1/4W F				
R772	1-249-409-91	CARBON	220 5% 1/4W F				
R773	1-249-409-91	CARBON	220 5% 1/4W F				
R774	1-249-437-11	CARBON	47K 5% 1/4W				
R775	1-249-417-11	CARBON	1K 5% 1/4W F				
R776	1-249-409-91	CARBON	220 5% 1/4W F				
R790	1-249-413-11	CARBON	470 5% 1/4W				
R791	1-249-412-11	CARBON	390 5% 1/4W				
R792	1-249-424-11	CARBON	3.9K 5% 1/4W				
R794	1-249-424-11	CARBON	3.9K 5% 1/4W				
R796	1-249-424-11	CARBON	3.9K 5% 1/4W				
R798	1-249-437-11	CARBON	47K 5% 1/4W				
R799	1-249-437-11	CARBON	47K 5% 1/4W				
<VARIABLE RESISTOR>							
R701	1-241-658-21	RES, ADJ, METAL FILM 110M					
R702	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M					

*A-1341-622-A	E BOARD, COMPLETE (KV-32TS36/32TS46)						

*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P						
<CAPACITOR>							
C1501	1-126-103-11	ELECT	470MF 20% 16V				
C1502	1-137-372-11	FILM	0.022MF 5% 50V				
C1503	1-102-234-00	CERAMIC	270PF 10% 500V				
C1504	1-136-165-00	FILM	0.1MF 5% 50V				
C1505	1-124-907-11	ELECT	10MF 20% 50V				
C1507	1-124-907-11	ELECT	10MF 20% 50V				
C1509	1-136-165-00	FILM	0.1MF 5% 50V				
C1510	1-137-370-11	FILM	0.01MF 5% 50V				
C1516	1-136-165-00	FILM	0.1MF 5% 50V				
C1519	1-136-104-00	FILM	0.16MF 5% 200V				
C1522	1-124-360-00	ELECT	1000MF 20% 16V				
C1523	1-136-177-00	FILM	1MF 5% 50V				
C1524	1-124-927-11	ELECT	4.7MF 20% 50V				
C1529	1-124-907-11	ELECT	10MF 20% 50V				
C1530	1-124-907-11	ELECT	10MF 20% 50V				
<CONNECTOR>							
CN122	*1-573-299-11	CONNECTOR, BOARD TO BOARD 10P					
CN123	*1-573-299-11	CONNECTOR, BOARD TO BOARD 10P					
<DIODE>							
D1501	8-719-911-19	DIODE	1SS119				
D1502	8-719-801-35	THYRISTOR	SHOR3042				
D1503	8-719-980-78	DIODE	ERA83-006				
D1504	8-719-300-33	DIODE	RU-3AM				
D1505	8-719-911-19	DIODE	1SS119				
D1506	8-719-911-19	DIODE	1SS119				
D1507	8-719-911-19	DIODE	1SS119				
D1508	8-719-110-17	DIODE	RD10ESB2				
D1509	8-719-110-17	DIODE	RD10ESB2				
D1510	8-719-911-19	DIODE	1SS119				
D1513	8-719-300-33	DIODE	RU-3AM				
D1515	8-719-911-19	DIODE	1SS119				
D1516	8-719-913-44	DIODE	ERA82-004				
D1517	8-719-911-19	DIODE	1SS119				
<IC>							
IC1501	8-752-052-88	IC	CXA1526P				
IC1502	8-759-982-10	IC	RC7809FA				
IC1504	8-759-135-80	IC	UPC358C				
<COIL>							
L1502	1-459-592-11	COIL (WITH CORE) (PMC)					
L1504	1-459-474-11	COIL (WITH CORE)					
<TRANSISTOR>							
Q1501	8-729-119-78	TRANSISTOR	2SC2785-HFE				
Q1502	8-729-140-96	TRANSISTOR	2SD774-34				
Q1503	8-729-119-76	TRANSISTOR	2SA1175-HFE				
Q1506	8-729-119-78	TRANSISTOR	2SC2785-HFE				
Q1507	8-729-119-78	TRANSISTOR	2SC2785-HFE				
Q1508	8-729-140-97	TRANSISTOR	2SB734-34				
Q1509	8-729-140-97	TRANSISTOR	2SB734-34				
Q1511	8-729-119-76	TRANSISTOR	2SA1175-HFE				
Q1514	8-729-209-15	TRANSISTOR	2SD2012				
Q1519	8-729-119-78	TRANSISTOR	2SC2785-HFE				
Q1520	8-729-119-78	TRANSISTOR	2SC2785-HFE				
<RESISTOR>							
R1501	1-249-409-11	CARBON	220 5% 1/4W				
R1502	1-249-409-11	CARBON	220 5% 1/4W				
R1503	1-249-435-11	CARBON	33K 5% 1/4W				
R1504	1-249-429-11	CARBON	10K 5% 1/4W				
R1505	1-249-421-11	CARBON	2.2K 5% 1/4W				
R1506	1-249-423-11	CARBON	3.3K 5% 1/4W				
R1507	1-249-410-11	CARBON	270 5% 1/4W				
R1508	1-249-437-11	CARBON	47K 5% 1/4W				
R1509	1-249-429-11	CARBON	10K 5% 1/4W				
R1510	1-215-461-00	METAL	47K 1% 1/4W				

The components identified by shading and mark Δ are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité
Ne les remplacer que par une pièce portant le numéro spécifié

E	D
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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1511	1-216-379-11	METAL OXIDE	6.8 5% 2W F	C524	1-102-212-00	CERAMIC	820PF 10% 500V
R1513	1-249-423-11	CARBON	3.3K 5% 1/4W	C525	1-124-902-00	ELECT	0.47MF 20% 50V
R1514	1-247-885-00	CARBON	180K 5% 1/4W	C526	1-106-395-00	MYLAR	0.15MF 10% 200V
R1515	1-215-905-11	METAL OXIDE	10 5% 3W F	C527	1-124-341-00	ELECT	1MF 20% 200V
R1519	1-249-417-11	CARBON	1K 5% 1/4W	C528	1-136-113-00	FILM	2MF 5% 200V
R1520	1-249-417-11	CARBON	1K 5% 1/4W	C529	1-137-410-11	FILM	0.001MF 10% 100V
R1522	1-249-417-11	CARBON	1K 5% 1/4W	C530	1-104-770-11	FILM	0.62MF 5% 200V
R1527	1-249-417-11	CARBON	1K 5% 1/4W	C530	1-104-844-11	CAP, FILM (S)	0.62MF
R1528	1-249-438-11	CARBON	56K 5% 1/4W	C531	1-124-477-11	ELECT	47MF 20% 25V
R1529	1-249-434-11	CARBON	27K 5% 1/4W	C532	1-136-165-00	FILM	0.1MF 5% 50V
R1530	1-249-432-11	CARBON	18K 5% 1/4W	C533	1-124-927-11	ELECT	4.7MF 20% 50V
R1533	1-249-427-11	CARBON	6.8K 5% 1/4W	C534	1-136-161-00	FILM	0.047MF 5% 50V
R1534	1-249-424-11	CARBON	3.9K 5% 1/4W	C535	1-124-911-11	ELECT	220MF 20% 50V
R1535	1-249-425-11	CARBON	4.7K 5% 1/4W	C536	1-137-421-91	FILM	0.068MF 10% 100V
R1536	1-215-857-11	METAL OXIDE	10 5% 1W F	C538	1-136-161-00	FILM	0.047MF 5% 50V
R1537	1-249-404-00	CARBON	82 5% 1/4W	C540	1-137-366-11	FILM	0.0022MF 5% 50V
R1538	1-216-379-11	METAL OXIDE	6.8 5% 2W F	C541	1-137-366-11	FILM	0.0022MF 5% 50V
R1541	1-249-441-11	CARBON	100K 5% 1/4W	C542	1-130-481-00	FILM	0.0068MF 5% 50V
R1543	1-249-414-11	CARBON	560 5% 1/4W	C545	1-124-927-11	ELECT	4.7MF 20% 50V
R1546	1-215-885-00	METAL OXIDE	68 5% 2W F	C547	1-164-079-11	CERAMIC	330PF 10% 50V
R1552	1-249-426-11	CARBON	5.6K 5% 1/4W	C548	1-162-116-91	CERAMIC	680PF 10% 2KV
R1554	1-249-393-11	CARBON	10 5% 1/4W	C550	1-106-387-00	MYLAR	0.068MF 10% 200V
R1556	1-249-438-11	CARBON	56K 5% 1/4W	C553	1-164-079-11	CERAMIC	330PF 10% 50V
R1559	1-249-429-11	CARBON	10K 5% 1/4W	C561	1-162-815-11	CERAMIC	47PF 5% 500V
R1564	1-249-435-11	CARBON	33K 5% 1/4W	C595	1-123-932-00	ELECT	4.7MF 20% 160V
R1568	1-247-891-00	CARBON	330K 5% 1/4W	C598	1-124-342-00	ELECT	3.3MF 20% 160V
R1569	1-249-413-11	CARBON	470 5% 1/4W	C600	1-124-907-11	ELECT	10MF 20% 50V
R1578	1-249-423-11	CARBON	3.3K 5% 1/4W	C601	1-136-311-51	FILM	0.47MF 20% 25V
R1582	1-249-411-11	CARBON	330 5% 1/4W	C602	1-136-311-51	FILM	0.47MF 20% 125V
R1583	1-249-421-11	CARBON	2.2K 5% 1/4W	C603	1-136-311-51	FILM	0.47MF 20% 125V
R1585	1-249-441-11	CARBON	100K 5% 1/4W	C604	1-162-378-81	CERAMIC	0.0047MF 20% 400V
R1586	1-247-891-00	CARBON	330K 5% 1/4W	C607	1-104-757-11	ELECT	470MF 20% 200V
*****				C608	1-104-757-11	ELECT	470MF 20% 200V
*A-1346-112-A	D BOARD, COMPLETE (KV-27TS36/27TS32 /27TS29)			C609	1-136-169-00	FILM	0.22MF 5% 50V
*A-1346-129-A	D BOARD, COMPLETE (KV-32TS46/32TS36)			C610	1-136-169-00	FILM	0.22MF 5% 50V
1-533-223-11	CLIP, FUSE			C611	1-136-169-00	FILM	0.22MF 5% 50V
4-382-854-11	SCREW (M3X10), P, SW (+)			C612	1-136-169-00	FILM	0.22MF 5% 50V
<CAPACITOR>				C613	1-164-625-11	CERAMIC	680PF 10% 500V
C501	1-124-557-11	ELECT	1000MF 20% 25V	C614	1-164-625-11	CERAMIC	680PF 10% 500V
C502	1-162-131-11	CERAMIC	220PF 10% 2KV	C616	1-124-907-11	ELECT	10MF 20% 50V
C503	1-124-557-11	ELECT	1000MF 20% 25V	C617	1-124-618-11	ELECT	2200MF 20% 35V
C504	1-137-366-11	FILM	0.0022MF 5% 50V	C618	1-124-557-11	ELECT	1000MF 20% 25V
C505	1-124-916-11	ELECT	22MF 20% 25V	C619	1-124-360-00	ELECT	1000MF 20% 16V
C506	1-124-929-11	ELECT	22MF 20% 100V	C620	1-164-644-11	CERAMIC	330PF 10% 500V
C507	1-124-046-00	ELECT	10MF 20% 160V	C621	1-126-356-11	ELECT	220MF 20% 160V
C509	1-124-916-11	ELECT	22MF 20% 25V	C623	1-162-117-00	CERAMIC	100PF 10% 500V
C511	1-123-024-21	ELECT	33MF 160V	C624	1-136-487-81	FILM	0.015MF 5% 50V
C512	1-102-212-00	CERAMIC	820PF 10% 500V	C625	1-129-744-91	FILM	0.027MF 10% 400V
C513	1-102-212-00	CERAMIC	820PF 10% 500V	C626	1-124-478-11	ELECT	100MF 20% 25V
C514	1-102-244-00	CERAMIC	220PF 10% 500V	C627	1-124-443-00	ELECT	100MF 20% 10V
C515	1-137-416-11	FILM	0.01MF 10% 100V	C628	1-164-497-51	CERAMIC	470PF 20% 400V
C517	1-162-116-00	CERAMIC	680PF 10% 2KV	C634	1-165-127-11	CERAMIC	470PF 10% 500V
C518	1-162-116-00	CERAMIC	680PF 10% 2KV	C635	1-124-477-11	ELECT	47MF 20% 16V
C519	1-137-324-11	FILM	0.02MF 3% 2KV	C636	1-137-374-11	FILM	0.047MF 5% 50V
C520	1-162-134-91	CERAMIC	470PF 10% 2KV	C637	1-124-916-11	ELECT	22MF 20% 25V
C521	1-136-316-51	FILM	0.05MF 5% 630V	C640	1-124-902-00	ELECT	0.47MF 20% 50V
C522	1-106-383-00	MYLAR	0.047MF 99% 200V	C641	1-124-443-00	ELECT	100MF 20% 10V
C523	1-102-002-00	CERAMIC	680PF 10% 500V	C642	1-137-217-11	FILM	0.01MF 5% 1.25KV
C524	1-102-002-00	CERAMIC	680PF 10% 500V	C643	1-137-218-11	FILM	0.012MF 5% 1.25KV
C525	1-102-002-00	CERAMIC	680PF 10% 500V	C645	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C526	1-106-383-00	MYLAR	0.047MF 99% 200V	C646	1-126-101-11	ELECT	100MF 20% 16V
C527	1-102-002-00	CERAMIC	680PF 10% 500V	C647	1-124-916-11	ELECT	22MF 20% 25V
C528	1-102-002-00	CERAMIC	680PF 10% 500V	C684	1-124-907-11	ELECT	10MF 20% 50V

KV-27TS29/27TS32/27TS36

RM-Y118 RM-Y117 RM-Y118

KV-32TS36/32TS46

RM-Y118 RM-Y118
SA-W200

D

Les composants identifiés par une
trame et une marque Δ sont
critiques pour la sécurité
Ne les remplacer que par une pièce
portant le numéro spécifié

The components identified by
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Replace only with part number
specified

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C695	1-124-907-11	ELECT 10MF 20% 50V		D622	8-719-911-19	DIODE 1SS119	
C2205	1-124-925-11	ELECT 2.2MF 20% 50V		D623	8-719-911-19	DIODE 1SS119	
C2208	1-124-925-11	ELECT 2.2MF 20% 50V		D624	8-719-911-19	DIODE 1SS119	
C2210	1-124-120-11	ELECT 220MF 20% 25V		D626	8-719-510-48	DIODE DIN20R	
C2211	1-124-477-11	ELECT 47MF 20% 25V		D627	8-719-510-48	DIODE DIN20R	
C2212	1-124-120-11	ELECT 220MF 20% 25V		D628	8-719-911-19	DIODE 1SS119	
C2213	1-136-173-00	FILM 0.47MF 5% 50V		D633	8-719-110-09	DIODE RD8.2ESB3	
C2215	1-136-169-00	FILM 0.22MF 5% 50V		D634	8-719-911-19	DIODE 1SS119	
C2216	1-124-480-11	ELECT 470MF 20% 25V		D635	8-719-911-19	DIODE 1SS119	
C2217	1-136-169-00	FILM 0.22MF 5% 50V		D636	8-719-510-48	DIODE DIN20R	
C2218	1-124-557-11	ELECT 1000MF 20% 25V		D637	8-719-911-19	DIODE 1SS119	
C2219	1-124-557-11	ELECT 1000MF 20% 25V		D638	8-719-911-19	DIODE 1SS119	
C2220	1-124-925-11	ELECT 2.2MF 20% 50V					
<CONNECTOR>				<FUSE>			
CN104	*1-573-979-11	CONNECTOR, BOARD TO BOARD 11P		F601	1-532-748-11	FUSE, GLASS TUBE (0.3A/125V)	
CN105	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P					
CN107	*1-580-798-11	CONNECTOR PIN (DY) 6P		<FERRITE BEAD>			
CN108	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P (KV-32TS46/32TS36)		FB501	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN109	1-573-296-11	CONNECTOR, BOARD TO BOARD 10P (KV-32TS46/32TS36)		FB502	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN112	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		FB601	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN113	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		FB602	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN114	*1-580-843-11	PIN, CONNECTOR (POWER)		FB603	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN115	1-573-298-11	CONNECTOR, BOARD TO BOARD 20P		FB604	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN116	*1-691-616-11	CONNECTOR, BOARD TO BOARD 15P		FB605	1-412-911-11	INDUCTOR, FERRITE BEAD	
CN117	*1-573-978-11	CONNECTOR, BOARD TO BOARD 11P		FB606	1-412-911-11	INDUCTOR, FERRITE BEAD	
				FB613	1-412-911-11	INDUCTOR, FERRITE BEAD	
				FB614	1-412-911-11	INDUCTOR, FERRITE BEAD	
<DIODE>				<IC>			
D501	8-719-976-64	DIODE RGP02-17		IC501	8-759-980-58	IC TDA8172	
D502	8-719-979-85	DIODE EGP20G		IC504	8-759-103-93	IC UPC393C	
D503	8-719-979-85	DIODE EGP20G					
D504	*8-719-902-44	DIODE RL12-V1		<POWER MODULE>			
D505	8-719-936-84	DIODE RGP10GPKG3		IC601	1-810-051-11	POWER MODULE SM-42	
D506	8-719-945-80	DIODE ERC06-15S					
D507	8-719-945-80	DIODE ERC06-15S		<IC>			
D508	8-719-900-26	DIODE ERD29-08J		IC602	8-759-805-37	IC L78LR05D-MA	
D509	8-719-936-84	DIODE RGP10GPKG3		IC604	8-759-924-12	IC LM7805CT	
D510	8-719-908-03	DIODE GP08D		IC605	8-759-701-79	IC LM7812CT	
D511	8-719-908-03	DIODE GP08D		IC606	8-759-982-10	IC RC7809FA	
D512	8-719-109-84	DIODE RD5.1ESB1		IC610	8-759-150-61	IC UPC78L05T	
D513	8-719-908-03	DIODE GP08D		IC2200	8-759-980-43	IC TDA2009A	
D514	8-719-911-19	DIODE 1SS119					
D515	8-719-911-19	DIODE 1SS119		<COIL>			
D601	8-719-911-19	DIODE 1SS119		L502	1-421-465-00	COIL, FERRITE CHOK 68UH	
D602	*8-719-510-63	DIODE D4SB60L-F		L503	1-412-524-11	INDUCTOR 8.2UH	
D603	8-719-500-69	DIODE S3V10SS		L504	1-410-669-31	INDUCTOR 33UH	
D605	8-719-500-69	DIODE S3V10SS		L505	1-459-104-00	COIL, WITH CORE	
D607	8-719-510-02	DIODE D1NS4		L506	1-422-613-11	COIL, AIR CORE	
D608	8-719-510-02	DIODE D1NS4		L508	1-412-553-11	INDUCTOR 3.3MMH	
D609	8-719-510-02	DIODE D1NS4		L509	*1-460-173-31	COIL, HORIZONTAL LINEARITY (RLC)	
D610	8-719-510-02	DIODE D1NS4		L510	1-406-607-11	COIL, CHOK 15MMH	
D611	8-719-510-02	DIODE D1NS4		L513	1-412-524-11	INDUCTOR 8.2UH	
D612	8-719-031-80	DIODE D5SC4MR					
D613	8-719-022-97	DIODE D2S4MF					
D614	8-719-110-33	DIODE RD12ESB3					
D615	8-719-027-43	DIODE S2L20UF					
D616	8-719-027-43	DIODE S2L20UF					
D617	8-719-027-43	DIODE S2L20UF					
D618	8-719-027-43	DIODE S2L20UF					
D619	8-719-510-02	DIODE D1NS4					

The components identified by shading and mark Δ are critical for safety
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité
Ne les remplacer que par une pièce portant le numéro spécifié

The components identified by Δ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation
Should replacement be required, replace only with the value originally used


KV-27TS29/27TS32/27TS36
RM-Y116 RM-Y117 RM-Y118
KV-32TS36/32TS46
RM-Y118 RM-Y118
SA-W200

D

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<PROTECTOR MODULE>				R547	1-247-883-00	CARBON	150K 5% 1/4W
PM501	1-810-061-11	PROTECTOR MODULE PM-39		R550	1-249-429-11	CARBON	10K 5% 1/4W
		(KV-27TS36/27TS32/27TS29)		R551	1-249-429-11	CARBON	10K 5% 1/4W
PM501	1-810-061-21	PROTECTOR MODULE PM-39		R554	1-216-371-00	METAL OXIDE	1.5 5% 2W F
		(KV-32TS46/32TS36)		R556	1-249-411-11	CARBON	330 5% 1/4W
				R557	1-249-415-11	CARBON	680 5% 1/4W F
<IC LINK>				R561	1-249-429-11	CARBON	10K 5% 1/4W
PS2201	1-532-675-9	LINK IC		R562	1-215-437-00	METAL	4.7K 1% 1/4W
<TRANSISTOR>				R563	1-249-429-11	CARBON	10K 5% 1/4W
Q502	8-729-119-80	TRANSISTOR 2SC2688-LK		R564	1-249-433-11	CARBON	22K 5% 1/4W
Q503	8-729-809-29	TRANSISTOR 2SC4159-E		R566	1-249-435-11	CARBON	33K 5% 1/4W
Q505	8-729-119-78	TRANSISTOR 2SC2785-HFE		R580	1-249-411-11	CARBON	330 5% 1/4W
Q591	8-729-016-32	TRANSISTOR 2SC4927-01		R601	1-202-888-91	SOLID	2.2K 20% 1/2W
Q601	8-729-019-51	TRANSISTOR 2SC4834MNP		R602	1-202-888-91	SOLID	2.2K 20% 1/2W
Q602	8-729-019-51	TRANSISTOR 2SC4834MNP		R603	1-249-419-11	CARBON	1.5K 5% 1/4W
Q603	8-729-119-76	TRANSISTOR 2SA1175-HFE		R605	1-247-893-11	CARBON	390K 5% 1/4W
Q604	8-729-119-78	TRANSISTOR 2SC2785-HFE		R606	1-247-893-11	CARBON	390K 5% 1/4W
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE		R607	1-202-933-91	FUSIBLE	0.1 10% 1/2W
Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE		R608	1-215-860-11	METAL OXIDE	33 5% 1W F
Q613	8-729-924-90	TRANSISTOR 2SB1370-BF		R609	1-216-352-11	METAL OXIDE	1.8 5% 1W F
Q614	8-729-119-78	TRANSISTOR 2SC2785-HFE		R610	1-216-352-11	METAL OXIDE	1.8 5% 1W F
Q2202	8-729-119-78	TRANSISTOR 2SC2785-HFE		R611	1-216-468-91	METAL OXIDE	82K 5% 2W F
Q2203	8-729-119-76	TRANSISTOR 2SA1175-HFE		R612	1-216-468-91	METAL OXIDE	82K 5% 2W F
<RESISTOR>				R613	1-215-860-11	METAL OXIDE	33 5% 1W F
R501	1-249-378-11	CARBON	0.56 5% 1/4W F	R614	1-215-860-11	METAL OXIDE	33 5% 1W F
R503	1-215-862-11	METAL OXIDE	68 5% 1W F	R615	1-249-421-11	CARBON	2.2K 5% 1/4W
R504	1-215-872-11	METAL OXIDE	3.3K 5% 1W F	R616	1-249-417-11	CARBON	1K 5% 1/4W
R505	1-249-377-11	CARBON	0.47 5% 1/4W F	R617	1-249-377-11	CARBON	0.47 5% 1/4W F
R506	1-215-886-11	METAL OXIDE	100 5% 2W F	R618	1-249-377-11	CARBON	0.47 5% 1/4W F
R507	1-249-429-11	CARBON	10K 5% 1/4W	R619	1-249-377-11	CARBON	0.47 5% 1/4W F
R508	1-249-425-11	CARBON	4.7K 5% 1/4W	R621	1-249-377-11	CARBON	0.47 5% 1/4W F
R509	1-249-389-11	CARBON	4.7 5% 1/4W F	R622	1-249-377-11	CARBON	0.47 5% 1/4W F
R511	1-249-389-11	CARBON	4.7 5% 1/4W F	R623	1-249-377-11	CARBON	0.47 5% 1/4W F
R512	1-249-389-11	CARBON	4.7 5% 1/4W F	R624	1-249-377-11	CARBON	0.47 5% 1/4W F
R513	1-216-393-00	METAL OXIDE	2.2 5% 3W F	R625	1-249-377-11	CARBON	0.47 5% 1/4W F
R514	1-249-429-11	CARBON	10K 5% 1/4W	R627	1-249-377-11	CARBON	0.47 5% 1/4W F
R515	1-216-363-00	METAL OXIDE	0.33 5% 2W F	R628	1-249-377-11	CARBON	0.47 5% 1/4W F
R516	1-249-401-11	CARBON	47 5% 1/4W	R629	1-249-388-11	CARBON	3.9 5% 1/4W F
R517	1-215-916-00	METAL OXIDE	680 5% 3W F	R630	1-215-857-11	METAL OXIDE	10 5% 1W F
R518	1-215-916-00	METAL OXIDE	680 5% 3W F	R632	1-249-417-11	CARBON	1K 5% 1/4W F
R519	1-249-426-11	CARBON	5.6K 5% 1/4W F	R633	1-249-405-11	CARBON	100 5% 1/4W F
R520	1-249-423-11	CARBON	3.3K 5% 1/4W	R635	1-249-413-11	CARBON	470 5% 1/4W F
R521	1-249-411-11	CARBON	330 5% 1/4W	R636	1-249-383-11	CARBON	1.5 5% 1/4W F
R522	1-215-886-11	METAL OXIDE	100 5% 2W F	R637	1-249-421-11	CARBON	2.2K 5% 1/4W
R523	1-215-862-11	METAL OXIDE	68 5% 1W F	R638	1-249-423-11	CARBON	3.3K 5% 1/4W
R524	1-247-887-00	CARBON	220K 5% 1/4W	R639	1-249-423-11	CARBON	3.3K 5% 1/4W
R527	1-215-861-00	METAL OXIDE	47 5% 1W F	R643	1-216-373-11	METAL OXIDE	6.8 5% 2W F
R528	1-260-326-71	CARBON	680 5% 1/2W	R644	1-212-853-91	FUSIBLE	6.8 5% 1/2W
R530	1-215-445-00	METAL	10K 1% 1/4W	R645	1-249-377-11	CARBON	0.47 5% 1/4W F
R531	1-247-903-91	CARBON	1M 5% 1/4W	R646	1-249-429-11	CARBON	10K 5% 1/4W
R532	1-215-446-00	METAL	11K 1% 1/4W	R647	1-249-433-11	CARBON	22K 5% 1/4W
R534	1-249-385-11	CARBON	2.2 5% 1/4W F	R648	1-249-414-11	CARBON	560 5% 1/4W
R535	1-216-453-00	METAL OXIDE	270 5% 2W F	R649	1-216-431-11	METAL OXIDE	560 5% 1W F
R536	1-249-389-11	CARBON	4.7 5% 1/4W F	R650	1-249-405-11	CARBON	100 5% 1/4W F
R539	1-215-459-00	METAL	39K 1% 1/4W	R651	1-212-954-91	FUSIBLE	6.8 5% 1/2W
R543	1-249-419-11	CARBON	1.5K 5% 1/4W	R652	1-212-954-91	FUSIBLE	6.8 5% 1/2W
R546	1-249-431-11	CARBON	15K 5% 1/4W	R653	1-249-381-11	CARBON	1 5% 1/4W
				R654	1-216-385-11	METAL OXIDE	0.47 5% 3W F
				R655	1-249-417-11	CARBON	1K 5% 1/4W F
				R656	1-249-381-11	CARBON	1 5% 1/4W
				R657	1-249-417-11	CARBON	1K 5% 1/4W
				R658	1-249-389-11	CARBON	4.7 5% 1/4W F

RM-Y118 RM-Y118
SA-W200

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The components identified by shading and mark  are critical for safety
Replace only with part number specified

C1001 1-124-916-11 ELECT 22MF 20% 25V
(KV-32TS46/32TS36/27TS36/27TS32)

REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
	C1002	1-124-903-11	ELECT 1MF 20% 50V (KV-32TS46/32TS36/27TS36/27TS32)	
	C1003	1-124-903-11	ELECT 1MF 20% 50V (KV-32TS46/32TS36/27TS36/27TS32)	
	C1004	1-124-122-11	ELECT 100MF 20% 50V	
			<CONNECTOR>	
	CN154	*1-564-520-11	PLUG, CONNECTOR 5P (KV-32TS46/32TS36/27TS36/27TS32)	
	CN155	*1-564-523-31	PLUG, CONNECTOR 8P	
			<DIODE>	
	D1004	1-810-039-11	LED UNIT	
			<IC>	
	IC1001	8-741-618-11	IC SBX1618-51	
			<JACK>	
	J1001	1-695-585-11	JACK BLOCK, PIN (L TYPE) 3P (KV-32TS46/32TS36/27TS36/27TS32)	
			<RESISTOR>	
	R1001	1-247-804-11	CARBON 75 5% 1/4W (KV-32TS46/32TS36/27TS36/27TS32)	
	R1002	1-249-425-11	CARBON 4.7K 5% 1/4W (KV-32TS46/32TS36/27TS36/27TS32)	
	R1003	1-216-113-00	METAL GLAZE 470K 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS32)	
	R1004	1-249-425-11	CARBON 4.7K 5% 1/4W (KV-32TS46/32TS36/27TS36/27TS32)	
	R1005	1-216-113-00	METAL GLAZE 470K 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS32)	
	R1007	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
	R1008	1-216-025-00	METAL GLAZE 100 5% 1/10W	
	R1009	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
	R1010	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
	R1011	1-216-025-00	METAL GLAZE 100 5% 1/10W	
	R1012	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
	R1013	1-216-033-00	METAL GLAZE 220 5% 1/10W	
	R1014	1-216-047-00	METAL GLAZE 820 5% 1/10W	
	R1015	1-216-033-00	METAL GLAZE 220 5% 1/10W	

KV-27TS29/27TS32/27TS36

RM-Y116

RM-Y117

RM-Y118

KV-32TS36/32TS46

RM-Y118

RM-Y118

SA-W200

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
JR419	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-32TS46/32TS36/27TS32/27TS36)		R431	1-216-045-00	METAL GLAZE 680 5% 1/10W (KV-27TS32)	
JR429	1-216-295-00	METAL GLAZE 0 5% 1/10W		R431	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS29)	
JR430	1-216-295-00	METAL GLAZE 0 5% 1/10W		R432	1-216-045-00	METAL GLAZE 680 5% 1/10W (KV-27TS32)	
JR431	1-216-295-00	METAL GLAZE 0 5% 1/10W		R432	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS29)	
JR434	1-216-295-00	METAL GLAZE 0 5% 1/10W		R434	1-216-045-00	METAL GLAZE 680 5% 1/10W (KV-27TS32)	
JR435	1-216-295-00	METAL GLAZE 0 5% 1/10W		R434	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS29)	
JR498	1-216-295-00	METAL GLAZE 0 5% 1/10W		R435	1-216-045-00	METAL GLAZE 680 5% 1/10W (KV-27TS32)	
JR499	1-216-295-00	METAL GLAZE 0 5% 1/10W		R435	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS29)	
JR1408	1-216-295-00	METAL GLAZE 0 5% 1/10W		R439	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
<COIL>				R440	1-216-025-00	METAL GLAZE 100 5% 1/10W (KV-27TS32/27TS29)	
L401	1-410-473-11	INDUCTOR 18UH (KV-32TS46/32TS36/27TS36)		R441	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
L403	1-410-476-11	INDUCTOR 33UH (KV-32TS46/32TS36/27TS36)		R442	1-216-025-00	METAL GLAZE 100 5% 1/10W (KV-27TS32/27TS29)	
L404	1-410-669-31	INDUCTOR 33UH (KV-32TS46/32TS36/27TS36)		R443	1-216-025-00	METAL GLAZE 100 5% 1/10W (KV-27TS32/27TS29)	
<TRANSISTOR>				R444	1-216-095-00	METAL GLAZE 82K 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS32)	
Q401	8-729-422-27	TRANSISTOR 2SD601A-Q		R445	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-32TS46/32TS36/27TS36)	
Q405	8-729-422-36	TRANSISTOR 2SB709A-Q		R446	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-32TS46/32TS36/27TS36)	
Q406	8-729-422-36	TRANSISTOR 2SB709A-Q		R450	1-216-627-11	METAL CHIP 100 0.50% 1/10W (KV-27TS32/27TS29)	
Q410	8-729-422-27	TRANSISTOR 2SD601A-Q (KV-32TS46)		R450	1-216-643-11	METAL CHIP 470 0.50% 1/10W (KV-32TS46/32TS36/27TS36)	
Q414	8-729-422-27	TRANSISTOR 2SD601A-Q (KV-32TS46/32TS36/27TS36)		R451	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46/32TS36/27TS36)	
Q415	8-729-422-27	TRANSISTOR 2SD601A-Q (KV-32TS36)		R452	1-216-025-00	METAL GLAZE 100 5% 1/10W (KV-32TS46)	
Q416	8-729-422-36	TRANSISTOR 2SB709A-Q (KV-32TS36)		R453	1-216-645-11	METAL CHIP 560 0.50% 1/10W	
Q417	8-729-422-36	TRANSISTOR 2SB709A-Q (KV-32TS36)		R453	1-216-653-11	METAL CHIP 1.2K 0.50% 1/10W (KV-27TS32/27TS29)	
Q418	8-729-422-36	TRANSISTOR 2SB709A-Q (KV-32TS36)		R454	1-216-025-00	METAL GLAZE 100 5% 1/10W (KV-27TS32/27TS29)	
<RESISTOR>				R454	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-32TS46/32TS36/27TS36)	
R401	1-247-804-11	CARBON 75 5% 1/4W (KV-32TS46/32TS36/27TS36/27TS32)		R456	1-216-041-00	METAL GLAZE 470 5% 1/10W (KV-32TS46/32TS36/27TS36)	
R402	1-216-113-00	METAL GLAZE 470K 5% 1/10W		R457	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-32TS46/32TS36/27TS36)	
R403	1-216-113-00	METAL GLAZE 470K 5% 1/10W		R458	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-32TS46/32TS36/27TS36)	
R404	1-247-804-11	CARBON 75 5% 1/4W		R459	1-216-081-00	METAL GLAZE 22K 5% 1/10W (KV-32TS46)	
R405	1-216-113-00	METAL GLAZE 470K 5% 1/10W		R460	1-216-037-00	METAL GLAZE 330 5% 1/10W (KV-32TS46)	
R406	1-216-113-00	METAL GLAZE 470K 5% 1/10W		R461	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46)	
R407	1-247-804-11	CARBON 75 5% 1/4W (KV-32TS46/32TS36/27TS36/27TS32)		R462	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46)	
R408	1-216-113-00	METAL GLAZE 470K 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS32)		R463	1-216-045-00	METAL GLAZE 680 5% 1/10W (KV-32TS46)	
R409	1-216-113-00	METAL GLAZE 470K 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS32)		R464	1-216-045-00	METAL GLAZE 680 5% 1/10W (KV-32TS46)	
R410	1-249-425-11	CARBON 4.7K 5% 1/4W (KV-32TS46/32TS36/27TS36/27TS32)		R475	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS32)	
R411	1-249-425-11	CARBON 4.7K 5% 1/4W (KV-32TS46/32TS36/27TS36/27TS32)		R476	1-216-081-00	METAL GLAZE 22K 5% 1/10W (KV-32TS46)	
R412	1-249-425-11	CARBON 4.7K 5% 1/4W					
R413	1-249-425-11	CARBON 4.7K 5% 1/4W					
R414	1-247-804-11	CARBON 75 5% 1/4W (KV-32TS46/32TS36/27TS36/27TS32)					
R415	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W (KV-32TS46/32TS36/27TS36/27TS32)					
R416	1-216-647-11	METAL CHIP 680 0.50% 1/10W					
R417	1-216-645-11	METAL CHIP 560 0.50% 1/10W (KV-32TS46/32TS36/27TS36)					
R417	1-216-645-11	METAL CHIP 560 0.50% 1/10W (KV-27TS32/27TS29)					
R418	1-216-025-00	METAL GLAZE 100 5% 1/10W (KV-27TS32/27TS29)					
R421	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					
R425	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W					

UA

The components identified by shading and mark Δ are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité
Ne les remplacer que par une pièce portant le numéro spécifié

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R477	1-216-049-00	METAL GLAZE 1K 5% 1/10W		*4-035-022-01	INDIVIDUAL CARTON		
R478	1-216-041-00	METAL GLAZE 470 5% 1/10W (KV-27TS32/27TS29)		*4-039-653-01	CUSHION (UPPER) (ASSY)	(KV-27TS36/27TS32/27TS29)	
R479	1-216-081-00	METAL GLAZE 22K 5% 1/10W (KV-32TS46)		*4-039-654-01	CUSHION (LOWER) (ASSY)	(KV-27TS36/27TS32/27TS29)	
R480	1-216-081-00	METAL GLAZE 22K 5% 1/10W (KV-32TS46)		4-040-227-01	CARTON, WOOFER		
R481	1-216-081-00	METAL GLAZE 22K 5% 1/10W (KV-32TS46)		4-040-527-01	FOOT, FELT		
R482	1-249-417-11	CARBON 1K 5% 1/4W		4-040-541-01	SPACER, WOOFER		
R483	1-249-417-11	CARBON 1K 5% 1/4W		*4-384-027-01	BAG, PROTECTION	(KV-27TS36/27TS32/27TS29)	
R488	1-216-081-00	METAL GLAZE 22K 5% 1/10W (KV-32TS46)					
R489	1-216-081-00	METAL GLAZE 22K 5% 1/10W (KV-32TS46)					
R490	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-32TS46/32TS36/27TS36)					
R491	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-32TS46/32TS36/27TS36)					
R492	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-32TS46/32TS36/27TS36)					
R1438	1-216-081-00	METAL GLAZE 22K 5% 1/10W					

MISCELLANEOUS							

1-402-952-11	COIL, DEMAGNETIZATION	(KV-32TS46/32TS36)					
1-417-178-11	SELECTOR, ANTENNA (AS-2)						
1-451-315-41	DEFLECTION YOKER (Y34FXA)						
1-451-275-41	DEFLECTION YOKER (Y34FXA)	(KV-32TS46/32TS36)					
1-452-032-00	MAGNET, DISK						
1-550-910-11	WOOFER, ACTIVE SUPER (SA-W200)	(KV-32TS46)					
1-751-059-11	CORD, POWER (WITH CONNECTOR)						
*1-751-135-11	CABLE, PIN						
*1-751-136-11	CABLE, PIN						
SP901 1-544-549-11	SPEAKER						
SP902 1-544-549-11	SPEAKER						
V901 1-8-733-723-05	PICTURE TUBE (A8QJYV50X)	(KV-32TS46/32TS36)					
V901 1-8-733-838-05	PICTURE TUBE (A68KZJ50X)	(KV-27TS36/27TS32/27TS29)					

ACCESSORIES & PACKING MATERIALS							

1-559-533-11	CORD, CONNECTION	(KV-32TS46)					
1-550-910-11	WOOFER, ACTIVE SUPER (SA-W200)						
1-466-966-11	REMOTE COMMANDER (RM-Y116)	(KV-27TS46)					
1-467-060-11	REMOTE COMMANDER (RM-Y117)	(KV-27TS32)					
1-467-059-11	REMOTE COMMANDER (RM-Y118)						
9-903-826-01	COVER, BATTERY	(KV-32TS46/32TS36/27TS36)					
3-756-618-21	MANUAL, INSTRUCTION	(RM-Y116/Y117/Y118)					
		(KV-32TS46(US)/32TS36(US)/27TS36(US)/27TS32(US))					
3-756-618-31	MANUAL, INSTRUCTION						
		(KV-32TS46(CND)/32TS36(CND)/27TS36(CND)/27TS29(CND))					

(SUPER WOOFER BOARD)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1331-264-A SUPER WOOFER BOARD, COMPLETE (KV-32TS46 only)				<IC>			
<CAPACITOR>				IC001	9-904-756-01	IC NJM2068S	
C001	1-102-114-00	CERAMIC	470PF 10% 50V	IC002	9-904-756-01	IC NJM2068S	
C002	1-102-114-00	CERAMIC	470PF 10% 50V	IC003	9-904-756-01	IC NJM2068S	
C003	1-124-903-11	ELECT	1MF 20% 50V	IC004	9-904-757-01	IC M5233L	
C004	1-124-903-11	ELECT	1MF 20% 50V	IC005	9-904-755-01	IC TA8225L(PA10-K)	
C005	1-130-494-11	FILM	0.082MF 5% 50V	<JACK>			
C006	1-130-490-11	FILM	0.039MF 5% 50V	J001	9-904-759-01	RCA JACK	
C007	1-130-494-11	FILM	0.082MF 5% 50V	<TRANSISTOR>			
C008	1-130-490-11	FILM	0.039MF 5% 50V	Q001	8-729-140-96	TRANSISTOR 2SD774-34	
C009	1-124-903-11	ELECT	1MF 20% 50V	Q002	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C010	1-124-903-11	ELECT	1MF 20% 50V	Q003	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C011	1-102-973-00	CERAMIC	100PF 10% 50V	Q004	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C012	1-124-903-11	ELECT	1MF 20% 50V	<RESISTOR>			
C013	1-124-908-00	ELECT	0.47MF 20% 50V	R001	1-249-405-11	CARBON 100 5% 1/4W	
C014	1-124-907-11	ELECT	10MF 20% 50V	R002	1-249-405-11	CARBON 100 5% 1/4W	
C015	1-124-910-11	ELECT	47MF 20% 50V	R003	1-249-426-11	CARBON 56K 5% 1/4W	
C016	1-124-472-11	ELECT	470MF 20% 10V	R004	1-249-426-11	CARBON 56K 5% 1/4W	
C017	1-124-472-11	ELECT	470MF 20% 10V	R005	1-247-862-11	CARBON 20K 5% 1/4W	
C018	1-124-120-11	ELECT	220MF 20% 25V	R006	1-247-862-11	CARBON 20K 5% 1/4W	
C019	1-124-120-11	ELECT	220MF 20% 25V	R007	1-247-862-11	CARBON 20K 5% 1/4W	
C020	1-102-074-00	CERAMIC	0.001MF 10% 50V	R008	1-247-862-11	CARBON 20K 5% 1/4W	
C021	1-130-491-00	FILM	0.047MF 5% 50V	R009	1-247-862-11	CARBON 20K 5% 1/4W	
C022	1-130-491-00	FILM	0.047MF 5% 50V	R010	1-247-862-11	CARBON 20K 5% 1/4W	
C023	1-124-360-00	ELECT	1000MF 20% 16V	R011	1-249-431-11	CARBON 15K 5% 1/4W	
C024	1-124-360-00	ELECT	1000MF 20% 16V	R012	1-249-413-11	CARBON 470 5% 1/4W	
C025	1-124-636-91	ELECT	3300MF 20% 25V	R013	1-247-864-11	CARBON 24K 5% 1/4W	
C026	1-124-472-11	ELECT	470MF 20% 10V	R014	1-247-864-11	CARBON 24K 5% 1/4W	
C027	1-124-472-11	ELECT	470MF 20% 10V	R015	1-247-864-11	CARBON 24K 5% 1/4W	
C028	1-124-472-11	ELECT	470MF 20% 10V	R016	1-247-864-11	CARBON 24K 5% 1/4W	
C029	1-124-907-11	ELECT	10MF 20% 50V	R017	1-249-417-11	CARBON 1K 5% 1/4W	
C030	1-102-129-00	CERAMIC	0.01MF 10% 50V	R018	1-249-429-11	CARBON 10K 5% 1/4W	
<CONNECTOR>				R019	1-247-903-91	CARBON 1M 5% 1/4W	
CN001	9-904-761-01	PIN, TERMINAL		R020	1-249-426-11	CARBON 5.6K 5% 1/4W	
<DIODE>				R021	1-249-417-11	CARBON 1K 5% 1/4W	
D001	9-904-758-01	DIODE RBA-402LP-A		R022	1-249-429-11	CARBON 10K 5% 1/4W	
D002	9-904-765-01	DIODE ERA15-02V8-T		R023	1-249-429-11	CARBON 10K 5% 1/4W	
D003	9-904-766-01	DIODE RD9R1ES(B2)-T		R024	1-249-417-11	CARBON 1K 5% 1/4W	
D004	9-904-766-01	DIODE RD9R1ES(B2)-T		R025	1-247-839-11	CARBON 2.2K 5% 1/4W	
D005	8-719-802-30	DIODE 1SS176		R026	1-249-429-11	CARBON 10K 5% 1/4W	
D006	8-719-802-30	DIODE 1SS176		R027	1-249-417-11	CARBON 1K 5% 1/4W	
				R028	1-247-903-91	CARBON 1M 5% 1/4W	
				R029	1-249-433-11	CARBON 22K 5% 1/4W	
				R030	1-249-440-11	CARBON 82K 5% 1/4W	
				R031	1-249-433-11	CARBON 22K 5% 1/4W	
				R032	1-247-839-11	CARBON 2.2K 5% 1/4W	
				R033	1-249-433-11	CARBON 22K 5% 1/4W	

(SUPER WOOFER BOARD)

REF.NO.	PART NO.	DESCRIPTION	REMARK
R034	1-249-429-11	CARBON 10K 5% 1/4W	
R035	1-249-429-11	CARBON 10K 5% 1/4W	
R036	1-249-433-11	CARBON 22K 5% 1/4W	
R037	1-249-417-11	CARBON 1K 5% 1/4W	
R038	1-247-866-11	CARBON 30K 5% 1/4W	
R039	1-249-405-11	CARBON 100 5% 1/4W	
R040	1-247-842-11	CARBON 3K 5% 1/4W	
R041	1-249-405-11	CARBON 100 5% 1/4W	
R042	1-247-842-11	CARBON 3K 5% 1/4W	
R043	9-904-764-01	METAL OXIDE 1 5% 1/2W	
R044	9-904-764-01	METAL OXIDE 1 5% 1/2W	
R045	9-904-762-01	METAL OXIDE 10 5% 1/4W	
R047	9-904-763-01	METAL OXIDE 1.8K 5% 1/2W	
R048	1-249-429-11	CARBON 10K 5% 1/4W	
R049	1-249-429-11	CARBON 10K 5% 1/4W	

<VARIABLE RESISTOR>

VR001 9-904-760-01 VOLUME

MISCELLANEOUS *****

* 9-904-750-01 CORE POWER
 * 9-904-753-01 AC OUTLET
 F001 * 9-904-752-01 FUSE
 SP001 9-900-278-01 SPEAKER
 T001 * 9-904-751-01 TRANSFORMER POWER

KV-27TS29/27TS32/27TS36

RM-Y116 RM-Y117 RM-Y118

KV-32TS36/32TS46

RM-Y116 RM-Y118
SA-W200

Sony Corporation
TV Group

9-964-933-01

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